

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

In the Matter of)	
)	
International Comparison and Consumer)	GN Docket No. 09-47
Survey Requirements in the Broadband)	
Data Improvement Act)	
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Inquiry Concerning the Deployment of)	GN Docket No. 09-137
Advanced Telecommunications Capability)	
To All Americans in a Reasonable and)	
Timely Fashion, and Possible Steps to)	
Accelerate Such Deployment Pursuant to)	
Section 706 of the Telecommunications Act)	
of 1996, as Amended by the Broadband)	
Data Improvement Act)	

**COMMENTS OF CONNECTED NATION, INC.
IN RESPONSE TO NBP PUBLIC NOTICE #3**

**CONNECTED NATION, INC.
444 North Capitol Street, Suite 224
Washington, DC 20001
877-846-7710
September 22, 2009**

Summary

Broadband is critical infrastructure, necessary to maintain economic stability and encourage economic growth. Several studies have shown that with a solid broadband foundation, America's opportunities for economic growth will quickly improve. And as the United States becomes ever more reliant on broadband, a key economic opportunity for our nation is emerging – Americans working from home through a broadband connection, commonly known as teleworking.

Connected Nation's research suggests that an estimated 35 million American workers are eager to telework nationally. In addition, an estimated 17.5 million Americans who do not currently work would join the country's workforce if given the opportunity to telework through a broadband connection. This includes more than 3.9 million retirees, 2.4 million homemakers and approximately 3.9 million adults with disabilities who report that teleworking would make employment compatible with their lives.

The economic impact of these new teleworkers would be dramatic. Through teleworking, these 17.5 million American adults would result in increased income earnings estimated at \$739 billion annually, including an additional \$163 billion for retirees, \$103 billion for homemakers and an additional \$166 billion for adults with disabilities. In addition, with the addition of these newly employed teleworking Americans, net federal revenue is estimated to increase by more than \$256 billion annually – and this accounts only for income tax revenue, social security revenue and federal disability savings.

Not only would America's economy benefit from an increase in teleworking, but so would the environment. CO₂ emissions are expected to drop by an additional 105 billion pounds a year if those interested in teleworking had the opportunity to do so. When combined with the emissions reductions from current teleworkers, this is more than the CO₂ emissions produced by every passenger car in the states of New York and California each year. Nationally, teleworkers save an estimated \$5.7 billion annually in fuel alone. If every American worker who would like to telework were enabled to do so, that would result in additional fuel savings of nearly \$13.6 billion per year for these Americans. Such a reduction in fuel consumption will significantly contribute to the national goal of energy independence.

In order to benefit from this growth in teleworking, though, America needs to place a high priority on increasing both the availability and the adoption of home broadband service. Nearly nine out of ten teleworkers rely on a broadband connection to work from home, and the broadband connection speeds of teleworkers are significantly higher than the average broadband user. Because of the benefits that accompany ubiquitous broadband availability and adoption, highlighting the benefits of teleworking has rightfully been recognized as a key component of the Commission's National Broadband Plan.

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A National Broadband Plan for Our Future)	GN Docket No. 09-51
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Inquiry Concerning the Deployment of Advanced Telecommunications Capability To All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act)	GN Docket No. 09-137
)	

**COMMENTS OF CONNECTED NATION, INC.
IN RESPONSE TO NBP PUBLIC NOTICE #3**

Broadband is widely recognized as critical infrastructure that is necessary to maintain economic stability and encourage economic growth. Several studies have shown that a solid broadband foundation is a key component in helping America grow its economic opportunities and climb out of its current recession.¹ At a time when unemployment rates are at a 26-year high,² the United States should support every available option to empower more Americans to work. As home broadband service is adopted by more and more American households, a

¹ Gillett, Sharon; Dr. William Lehr; Carlos Osorio; and Marvin Sirbu, "Measuring the Economic Impact of Broadband Deployment." Feb 2006. Also, *The Economic Impact of Stimulating Broadband Nationally*. Connected Nation. February 2008.

² http://money.cnn.com/2009/09/04/news/economy/jobs_august/index.htm

key economic opportunity for our nation is emerging – Americans working from home through a broadband connection, commonly known as teleworking.

In its recent public notice (DA 09-2018, released Sept 4, 2009), the FCC rightly asserted that broadband is “transforming the way we work, enabling employees to work wherever and, often, whenever.” The FCC is in the process of formulating a national broadband plan that will impact whether America once again becomes the world leader in broadband adoption, or whether it continues to languish behind other developed countries. More than simply an issue of national pride, America’s broadband capability will affect our economy’s ability to grow and prosper in the coming years as it works to stay competitive in the global market. This issue was recently highlighted when the World Economic Forum reported that the United States dropped from its position as the most competitive nation in the world.³

Connected Nation applauds the FCC in its recognition that home broadband service is not only a means of entertainment, but also a vital tool to empower America’s 21st century workforce. Connected Nation’s research has shown that teleworking can provide new opportunities for the American workforce, but to do so, home broadband availability and adoption must both increase in order to realize the full potential growth.

³ Schwab, Klaus, for the World Economic Forum, “The Global Competitive Report 2009-2010.” <http://www.weforum.org/pdf/GCR09/GCR20092010fullreport.pdf>, retrieved on 09/22/2009.

Background

According to the American Electronics Association, “[f]or widespread adoption of telework, the United States needs ubiquitous broadband Internet access.”⁴ Through the use of a broadband connection, teleworkers are able to access many tools that would be otherwise unavailable to them. In order to remain productive, teleworkers often need fast, reliable access to large files that would take too much time to transfer via a dial-up connection. In addition, whereas face-to-face meetings once required long, expensive travel times, broadband connections now make these meetings easier and more cost effective, while still allowing contributors to benefit from the ability to observe non-verbal cues during the meeting. In fact, research indicates that only 7% of a message’s meaning is conveyed by the words that are delivered, while 55% of its meaning is conveyed by facial expressions, and 38% is conveyed through voice tone.⁵ This suggests that teleworkers who rely on phone conversations and faxes miss more than one-half of what is being communicated; in order to communicate effectively, teleworkers must be able to receive non-verbal cues from their co-workers and clients, which requires the use of broadband service for video conferencing.

In addition to allowing employees to work from home on a regularly scheduled basis, teleworking also allows employers to continue operating in the face of natural or man-made disasters. The United States General Services

⁴ http://www.aeanet.org/Publications/AeA_CS_Telework.asp.

⁵ Yun Chu et al., *Silent Messages In Negotiations: The Role of Nonverbal Communication In Cross-cultural Business Negotiations* 4, J. ORG. CULTURE, COMM. & CONFLICT, Jul., 2008, available at http://findarticles.com/p/articles/mi_m1TOT/is_2_9/ai_n25121995.

Administration and the Telework Exchange studies show that businesses benefit from the ability to maintain continuity of operations in the face of natural disasters or other emergencies that can disable centralized workplaces.⁶ In addition, a pre-established telework policy enables businesses to continue to operate smoothly when an employee's illness would reduce workplace efficiency. While that benefit most often applies to employees who may work from home to prevent spreading a common cold, it could also prove beneficial for workers and the business itself in the event of more serious health risks (a concern that has become all too real recently as the World Health Organization announced in June 2009 that the world is in the midst of a Swine flu pandemic).⁷ Before teleworking can be considered as part of a contingency plan, though, businesses must have in place a tested telework policy prior to situations in which the centralized workplace is disabled or unsafe. These policies, as well as the pre-requisite capability for secure broadband access at the employee's home (which includes the necessary hardware, security software to retain data integrity, and a subscription to home broadband service for the employee, as well as the need for redundant infrastructure on the part of broadband providers to ensure that lines of communication remain open despite emergency situations), must be in place and tested before any such disaster strikes, rather than implemented on an ad-hoc or piecemeal basis in the midst of crisis management. Once a telework

⁶ "The Benefits of Telework," US GSA and the Telework Exchange.
<http://www.teleworkexchange.com/pdfs/The-Benefits-of-Telework.pdf>.

⁷ http://www.who.int/mediacentre/news/statements/2009/h1n1_pandemic_phase6_20090611/en/index.html

policy has been established, businesses and employees alike will be able to benefit from the opportunities that teleworking presents.

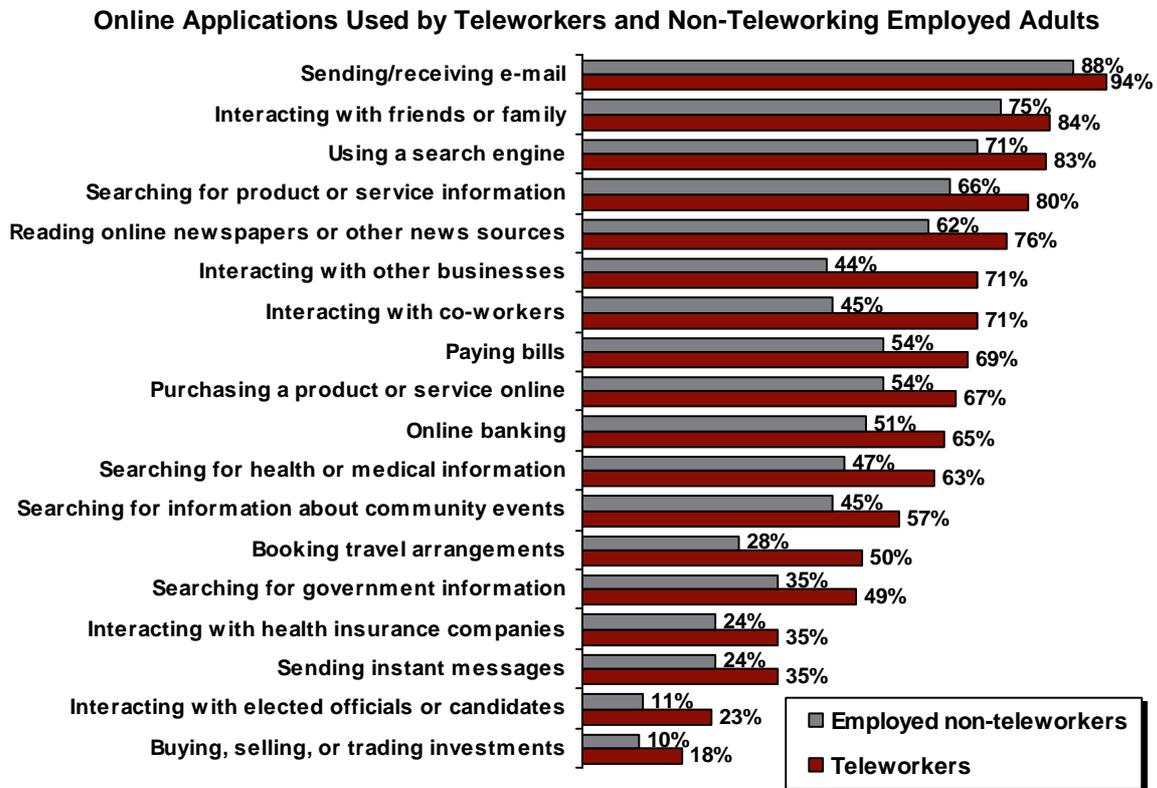
Telework in America

The work that teleworkers conduct online is often vital to keeping the country's government and economy running smoothly. Almost one-quarter (24%) of Ohio businesses that allow their employees to telework are in the professional and financial services sector.⁸ Teleworkers themselves are also different from non-teleworking Internet users in the online applications that they use. In Ohio, the most recently released survey conducted by Connected Nation shows that employed adults who telework are significantly more likely to use a search engine, search for health or medical information, and seek information about government services or policies than employed adults who do not telework. In addition, significantly more teleworkers send e-mails and instant messages, and communicate online with a host of audiences (such as friends or family, co-workers, businesses, health insurance providers, and elected officials), and conduct online financial transactions like paying bills, buying goods or services, online banking, and buying, selling, or trading investments, than similarly employed residents who do not telework (figure 1).⁹

⁸ Source: 2009 Connect Ohio Business Technology Assessment. n=167 Ohio businesses that allow their employees to telework.

⁹ Source: 2009 Connect Ohio Residential Technology Assessment. n=106 Ohio teleworkers and 523 employed Ohio adults who do not telework. Significance measured at a 95% confidence rate.

Figure 1



While some of these applications require low-latency broadband connections or broadband connections faster than 768 Kbps download to run optimally, the one requirement they have in common is the fact that dial-up Internet service generally cannot handle *any* of these tasks at a speed that would be practical for businesses that want to remain competitive. Therefore, though it is important for Americans to have access to the fastest broadband speeds possible, the initial focus of the Commission should be to develop a National Broadband Plan that first gets broadband service into every household.

Once home broadband service becomes accessible and affordable to every American household, the benefits of teleworking will begin to be seen on a

large scale. Already, businesses that have empowered their employees to telework are seeing the advantages of implementing a telework policy that helps their employees remain productive while saving the business money in overhead, office rental, and travel costs.

For example, during the Telework Leadership Initiative (TLI) in 2003-2005, thirteen employers from across the Atlanta region designed and implemented six-month pilot programs that resulted in more than 2,300 new teleworkers to date.

Among the many positive results from those six-month pilot studies:

- Children's Healthcare of Atlanta reported that almost 90% of management concluded that teleworking was "good for the organization."
- Ninety-nine percent of teleworkers and 75% of managers at GE Energy reported that company morale had improved since the pilot study.
- The Georgia Department of Education saved \$27,000 annually in office space costs, and realized a 20% increase in productivity on average.
- At the Georgia Department of Corrections, teleworkers eliminated nearly two hours of commuting time per day of teleworking, with almost two-thirds of employees using that time to do extra work for the employer.¹⁰

If even a fraction of these successes could be implemented nationally, America would see a boost in its efficiency and its air quality rates, at the same time as it reduces its reliance on foreign oil. In order to accomplish this goal, however, households need to have affordable broadband accessible to them,

¹⁰ Telework case studies by The Clean Air Campaign. Retrieved January 28, 2008, from <http://www.cleanaircampaign.com>.

and individuals have to recognize the benefits that result from adopting home broadband service.

The impact that broadband has both on businesses and on workers is evidenced by the growing number of businesses that are now developing telework policies. According to the Telework Advisory Group of WorldatWork, 17.2 million American employees teleworked at least one day per month in 2008, and by doing so they increased their productivity, saved commuting time, and reduced the pollution and personal stress caused by the daily commute to and from work.¹¹ This figure is especially impressive when one considers that in 2005, only an estimated 9.9 million employed adults engaged in telework at least one day per month, representing a three-year growth rate of 74 percent.¹²

The 74% growth in telework since 2005 is just the beginning of a transformational evolution of Americans' telework practices, brought about in part by the growth in broadband availability and adoption. Residential surveys conducted by Connected Nation in Kentucky, Tennessee, and Ohio from 2007-2008 show that while 10% of employed adults currently telework, an additional 24% of employed adults who do not currently telework would be interested in doing so if they were empowered to telework (figure 2).¹³ Nationally, this would

¹¹ WorldatWork: Telework Trendlines for 2009.

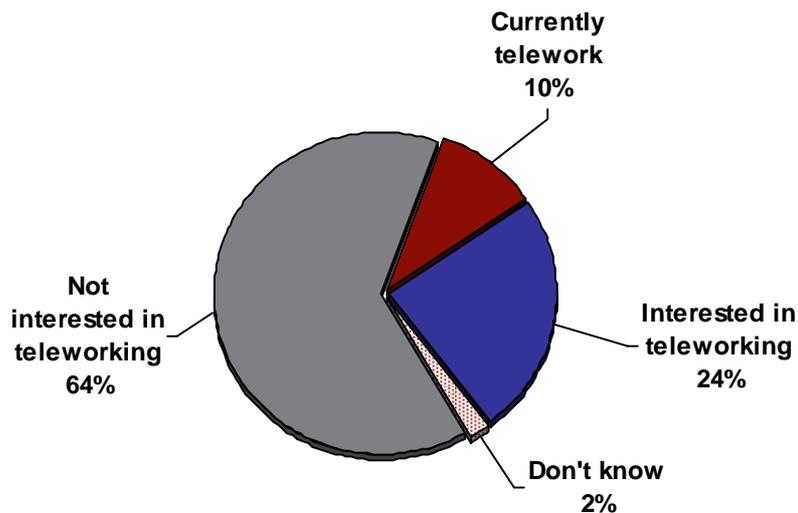
http://www.workingfromanywhere.org/news/Trendlines_2009.pdf

¹² Ibid.

¹³ n = 6,151 employed KY, OH, and TN adults from the ConnectKentucky, Connected Tennessee, and Connect Ohio Residential Technology Assessments (2007-2008).

equate to nearly 35 million potential teleworkers, for a total of 49.5 million or 34% of the employed adult population.¹⁴

Figure 2
Interest in Teleworking Among Employed Adults



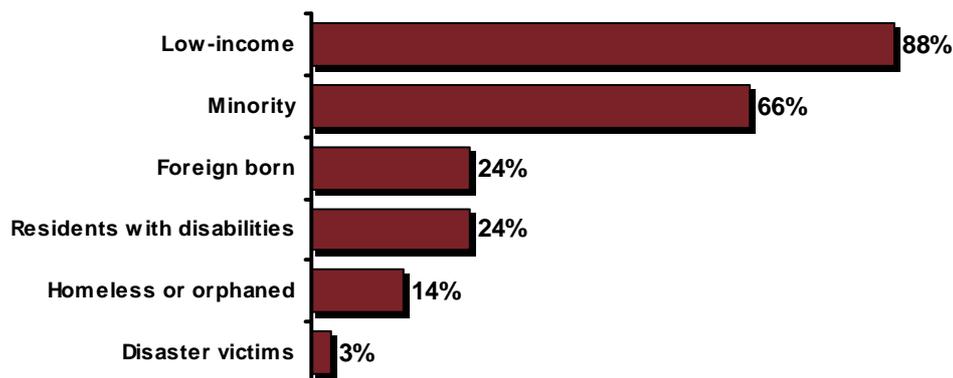
Without increased availability and adoption of broadband, or a corresponding increase in computer literacy, many of the potential benefits associated with teleworking will remain untapped. To combat the barrier of digital literacy, Connected Nation has partnered with industry and state leaders to develop programs such as Computers 4 Kids in Tennessee and Kentucky, and No Child Left Offline in Ohio. These programs support digital literacy by providing free refurbished computers to low-income families and the community organizations that support them. As a result of these grassroots programs, over 5,300 refurbished computers have been given to low-income families who otherwise would not have been able to afford them. In addition, these public-

¹⁴ Based on employed civilian labor force of 145.5 million, reported by the US Bureau of Labor Statistics for Q3, 2008 (www.bls.gov).

private partnerships have donated computers to over a dozen schools, community centers, and outreach centers across Kentucky, providing access to Kentucky citizens who otherwise would have no opportunity to freely access a computer or broadband connection (figure 3).¹⁵ On average, each computer that Computers 4 Kids donated to a non-profit agency in Kentucky provided computer access to an estimated eight individuals who do not own a home computer, and Internet access for an estimated seven individuals who did not access the Internet anywhere else.¹⁶

Figure 3

Kentucky Residents Who Use Technology Donated by Computers 4 Kids



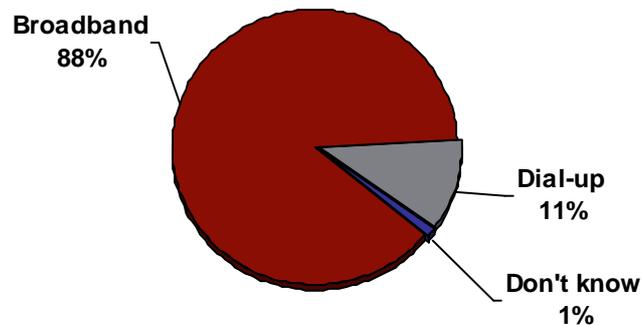
No Child Left Offline and Computers 4 Kids help ensure that every person has the experience and the skills to utilize the advanced computing applications that would be necessary to telework. Once employees have mastered these skills, the transition from working in an office setting to teleworking from home will be much easier, making it possible for many more Americans to telework.

¹⁵ Source: Computers 4 KidsSM Agency Questionnaire

¹⁶ Ibid.

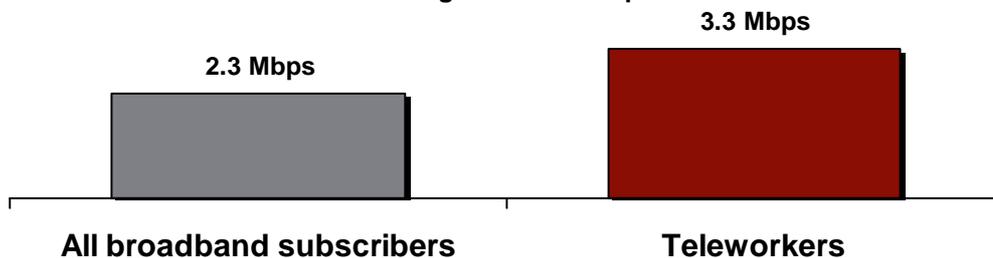
While it is impossible to reduce the entire teleworking population down to a “typical” teleworker, Connected Nation’s Residential Technology Assessments enable us to create a profile of the current teleworking population. The vast majority of teleworkers rely on their home broadband connection to work from home (figure 4),¹⁷ once again showing how important broadband adoption is to the growth in teleworking.

**Figure 4
Teleworkers by Internet Connection**



To be productive from home, teleworkers not only rely on high speed Internet, but they tend to rely on home broadband connections that are significantly faster than average (figure 5).¹⁸

**Figure 5
Average Download Speeds**

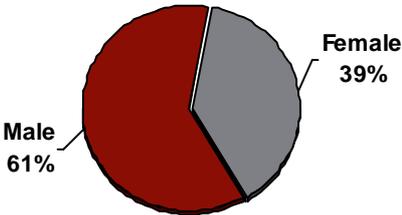


¹⁷ n=170 teleworkers in Tennessee and Ohio (Source: 2008 Connect Ohio and July 2008 Connected Tennessee Residential Technology Assessments).

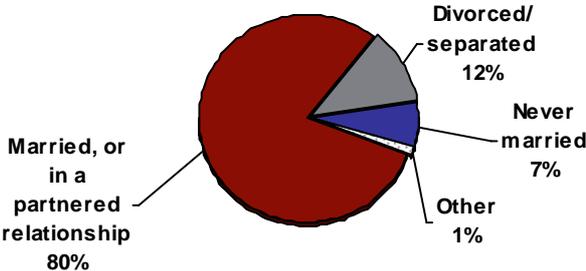
¹⁸ n=547 Tennessee and Ohio residents who have home broadband service and know their approximate download speed (Source: 2008 Connect Ohio and July 2008 Connected Tennessee Residential Technology Assessments).

Nearly two out of three teleworkers (61%) are men (figure 6),¹⁹ and four out of five teleworkers are currently married or in a partnered relationship (figure 7).²⁰

**Figure 6
Teleworkers by Gender**

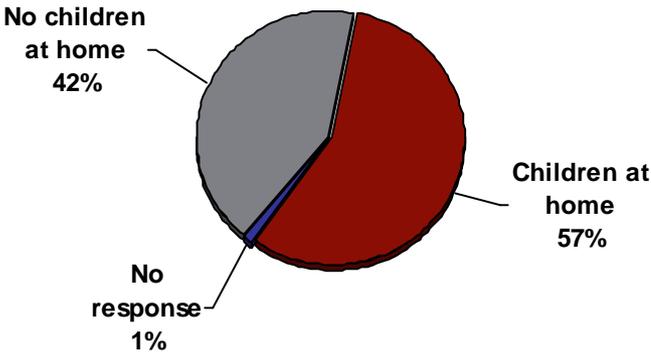


**Figure 7
Teleworkers by Marital Status**



More than one-half (57%) of teleworkers have children living at home (figure 8),²¹ which means that these teleworking parents can spend less time commuting and more time at home with their families.

**Figure 8
Teleworkers by Presence of Children At Home**

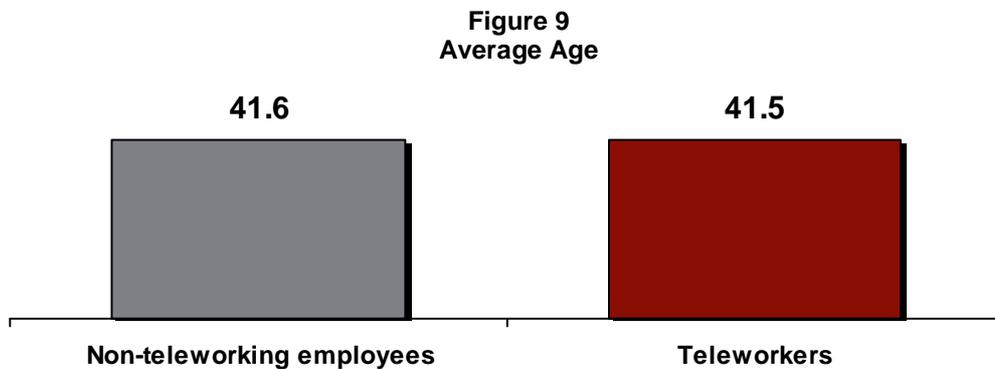


¹⁹ n=170 Tennessee and Ohio teleworkers (Source: 2008 Connect Ohio and July 2008 Connected Tennessee Residential Technology Assessment).

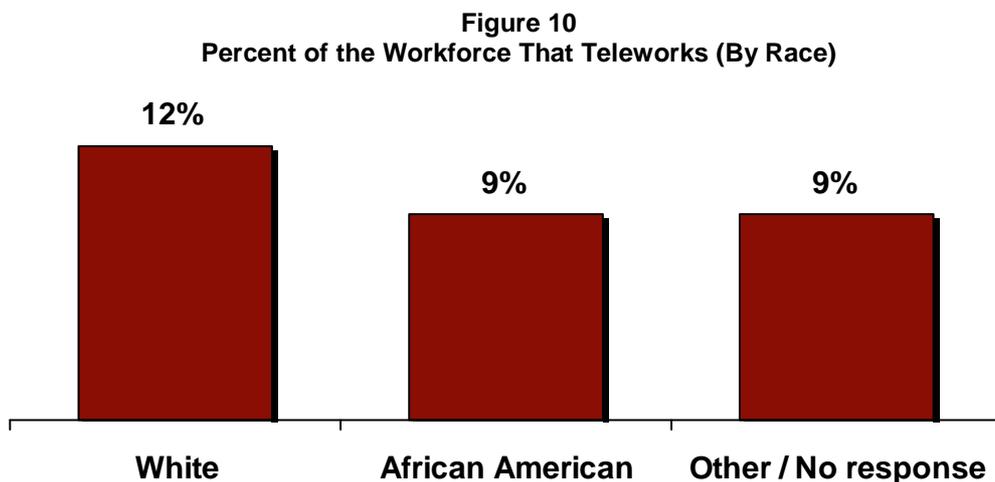
²⁰ Ibid.

²¹ Ibid.

There is no significant difference between teleworkers and non-teleworking employees in terms of average age (figure 9)²².



There is also no significant difference between racial groups in terms of teleworking (figure 10).²³ Twelve percent of White employed adults said that they telework, compared to 9% of employed African American adults and 9% of employed adults who describe themselves as belonging to some other race or gave no response.

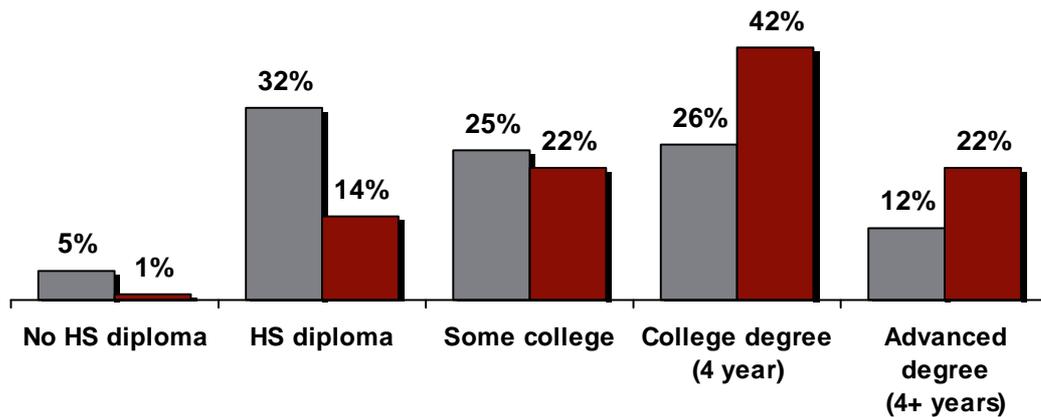


²² n=1,446 Tennessee and Ohio residents employed part- or full-time (Source: 2008 Connect Ohio and July 2008 Connected Tennessee Residential Technology Assessments).

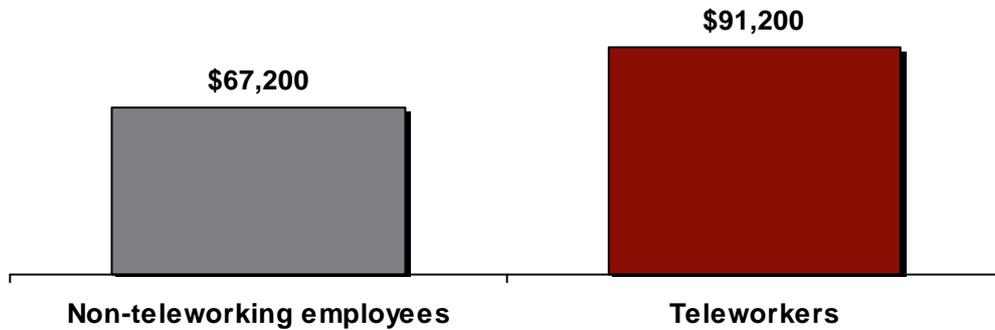
²³ Ibid.

There are, however, significant differences between teleworkers and non-teleworking employees in terms of education (figure 10)²⁴ and annual household income (figure 11).²⁵

**Figure 11
Teleworkers by Education**



**Figure 12
Median Household Incomes**



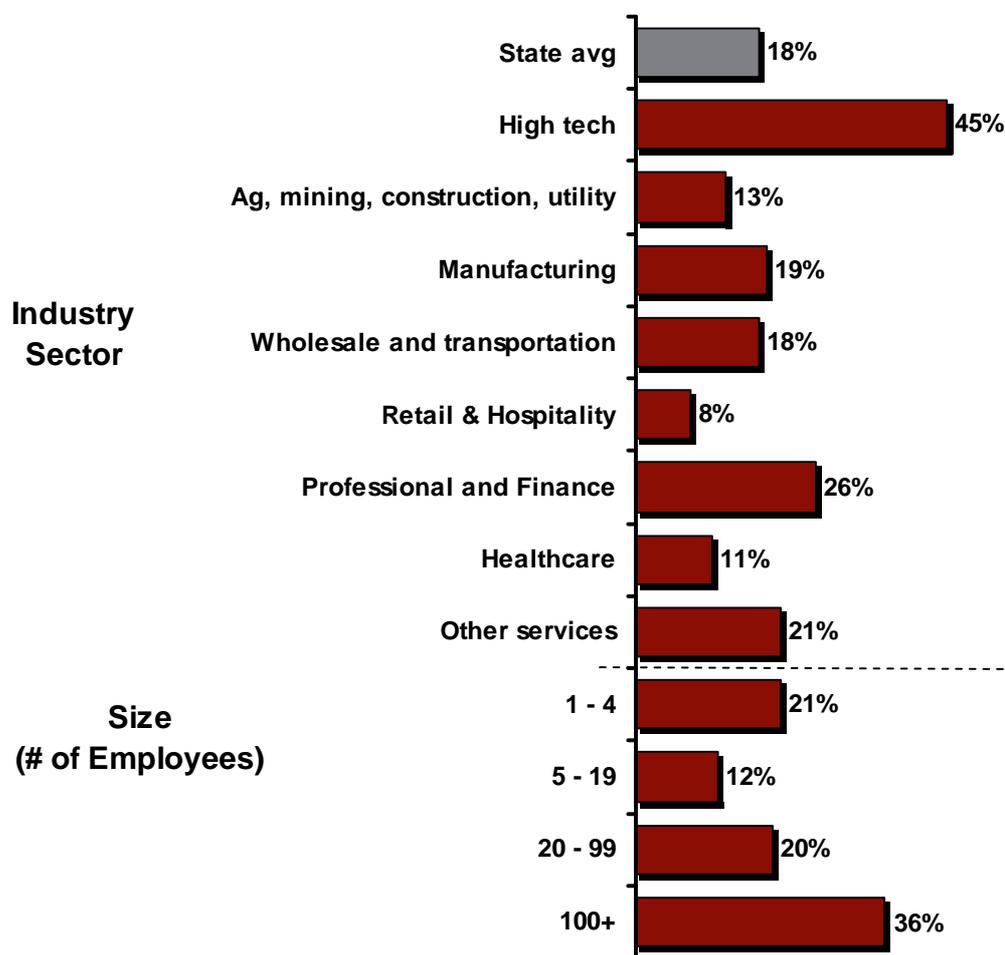
Teleworkers are much more likely to have at least a four-year college degree than non-teleworkers, which results (in part) in teleworkers earning \$24,000+ more per year than the average non-teleworking employee.

²⁴ Ibid.

²⁵ Ibid.

Connected Nation’s 2009 Ohio Business Technology Assessment (the most recent business assessment released by Connected Nation) showed that in Ohio, 18% of all businesses allow their employees to telework, including 45% of businesses in the High Tech sector, and more than one-third of large businesses with more than 100 employees (figure 13).²⁶

Figure 13
Percent of Ohio Businesses That Allow Employees to Telework

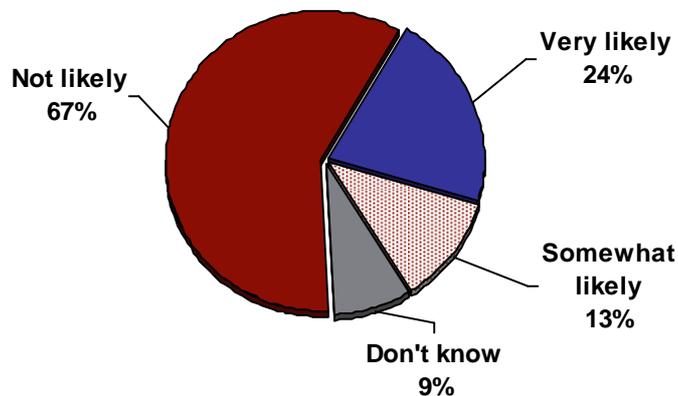


²⁶ 2009 Connect Ohio Business Technology Assessment

Potential Benefits of Teleworking

The benefits of teleworking do not end with current workers, though. According to Connected Nation survey research, nearly one-quarter of all residents who are not currently in the workforce (including retirees, disabled residents, students and homemakers) say they would likely join the workforce if they were enabled to telework (figure 14).²⁷ Telework becomes an enabler for non-working Americans by transforming employment into something that is compatible with the realities in their lives.

Figure 14
Likelihood That Individuals Who Are Not Currently In the Workforce
Would Join If Allowed to Telework

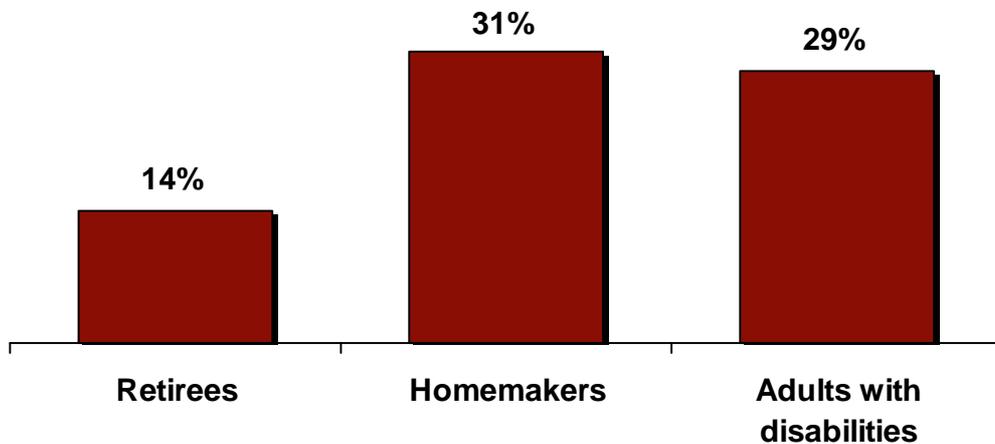


Importantly, 14% of retirees, 31% of homemakers, and 29% of adults with disabilities said they would be willing to join the workforce if they could telework through a broadband connection (figure 15).²⁸

²⁷ n=1,238 KY, TN, and OH adults not currently employed in the labor force (from 2007-2008 ConnectKentucky, Connected Tennessee and Connect Ohio Residential Technology Assessments).

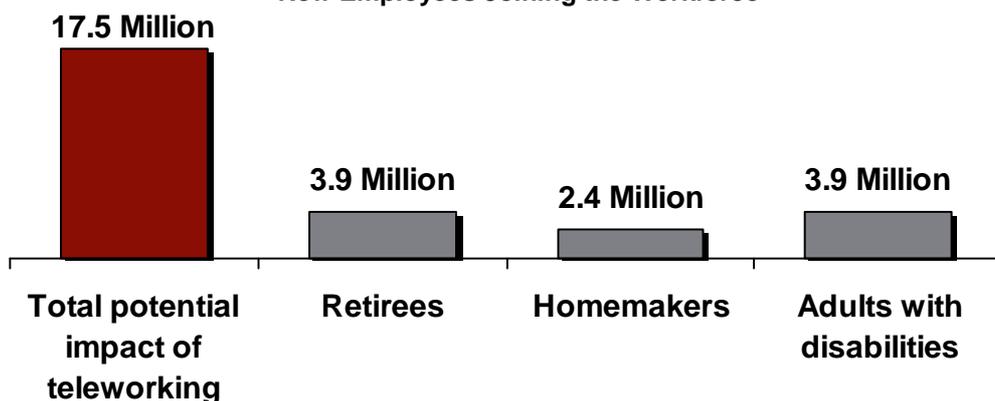
²⁸ Ibid.

Figure 15
Likely to Telework Via Broadband



If every adult who is not currently in the workforce but expressed a willingness to telework were enabled to do so (minus national unemployment rates), nearly 17.5 million additional adults would be enabled to work.²⁹ This includes nearly 4 million adults with disabilities, 2.4 million homemakers, and 3.9 million retirees (figure 16).³⁰

Figure 16
New Employees Joining the Workforce

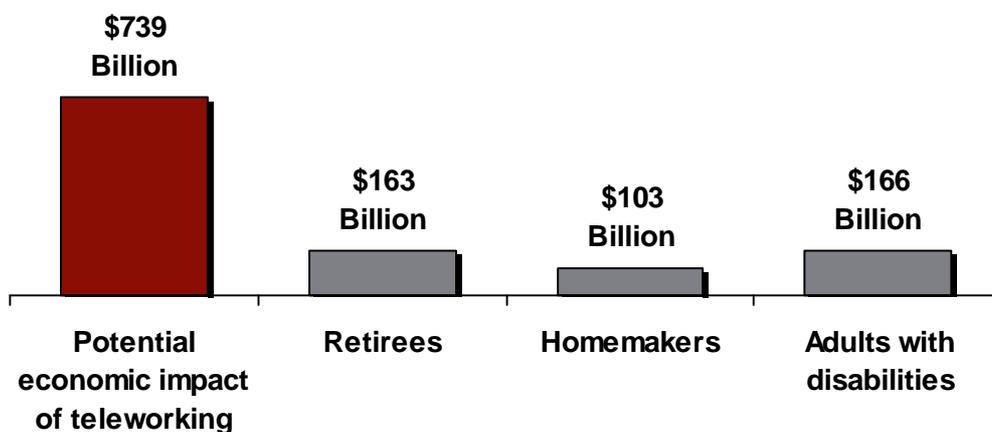


²⁹ Equaling 24% of the 80,371,000 million adults not currently in the workforce (as reported by the US Bureau of Labor Statistics in June, 2009), minus the current unemployment rate of 9.4% (also reported by the US Bureau of Labor Statistics) (<http://www.bls.gov/news.release/empsit.nr0.htm>).

³⁰ Figures for the number of adults with disabilities, retirees, and homemakers not currently in the workforce come from the United States Census Bureau (www.census.gov), minus the national unemployment rate of 9.4%, reported by US Bureau of Labor Statistics in June, 2009 (www.bls.gov).

The economic impact of those new workers would be significant. If we assume that new teleworkers earn the national average income, these new teleworkers would create an additional \$739 billion income earnings annually.³¹ That includes over \$163 billion for retirees, \$103 billion for homemakers, and \$166 billion that would be earned by adults with disabilities each year (figure 17).

Figure 17
Additional Potential Income for Teleworkers

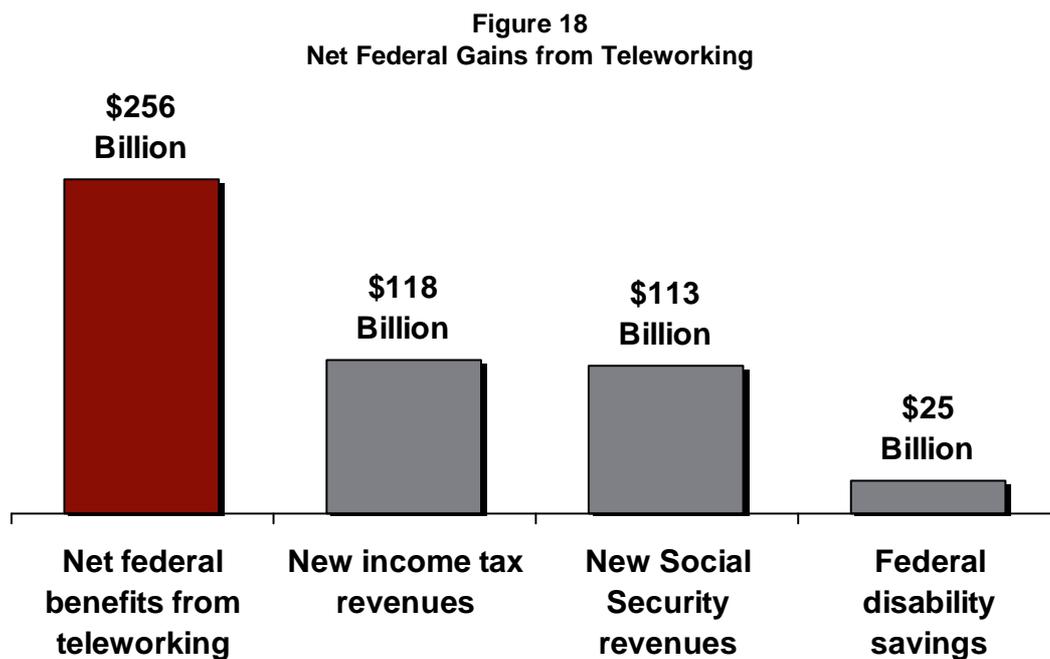


The economic impact of increased work among these groups would, of course, also have important repercussions on the national budget. If nearly four million adults with disabilities joined the workforce, it would dramatically reduce the total amount the federal government pays out in disability benefits. Under the conservative assumption that the federal government could save 50% on disability payments to these new teleworkers, the United States government

³¹ Based on the 2008 mean annual income of \$42,270, as reported by the United States Bureau of Labor Statistics (http://www.bls.gov/oes/current/oes_nat.htm)

would save approximately \$25 billion annually.³² In addition, the 17.5 million-person growth in the labor force would result in \$231 billion in new income tax and social security tax revenues.³³

There are likely additional federal tax revenue streams that would increase, as well as a positive impact on state tax revenue – none of which is considered in this analysis. Using just these estimates, the federal government alone would realize a net increase of over \$256 billion annually if Americans who want to telework were enabled to do so (figure 18).



³² According to the *Ultimate Social Security Disability Guide*, average monthly disability payments (SSDI) as of December 2008 were \$1,063 which would be an average annual disability payment of \$12,756

<http://www.ultimatedisabilityguide.com/statistics.html>

This figure was then halved and multiplied by the estimated four million adults with disabilities who would potentially telework.

³³ Based on income taxes equaling \$6,755 on an annual income of \$42,270 (<http://www.themoneyalert.com/Tax-Tables.html>), and FICA contributions of \$6,467.31 (15.3% x \$42,270 annually, <http://www.ssa.gov/OACT/ProgData/taxRates.html>) for nearly 17.5 million new teleworkers in the workforce.

In addition to the many benefits for American workers, studies show that teleworking will also help American businesses. Many major businesses offer teleworking as an employee benefit, including Cisco, Principal Financial Group, and SC Johnson and Son. In fact, 84 of *Fortune* magazine's 100 Best Companies to Work For allow teleworking for at least 20% of an employee's schedule.³⁴ And while there is little consensus on how much teleworker productivity increases, several case studies have shown that productivity does remain stable or increases among employees who telework. One such study was conducted by the National Science Foundation (NSF) in 2007, and reported that 87% of NSF supervisors who manage teleworkers reported that employee productivity either remained the same or increased while teleworking.³⁵

Environmental Benefits of Telework

Yet another way in which America would benefit from an increase of teleworking is through a decrease in pollution resulting from fewer commuters on American roadways. According to a 2007 report by the World Bank, the United States produces more carbon dioxide (CO₂, a major greenhouse gas) than any other country in the world.³⁶ Indeed, according to a 2006 report by the Environmental Defense Fund, the United States produced over 314 million metric

³⁴ <http://money.cnn.com/magazines/fortune/bestcompanies/2008/benefits/telecommuting.html>.

³⁵ "National Science Foundation and Telework Exchange Study Validates Telework Productivity Hypothesis."
<http://www.teleworkexchange.com/pdfs/Telework-Exchange-NSF-Study-Press-Release.pdf>.

³⁶ The Little Green Data Book 2007, published by the World Bank.
<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21328109~pagePK:34370~piPK:34424~theSitePK:4607,00.html>.

tons (or more than 692 billion lbs.) of CO₂ in 2004.³⁷ Stanford University studies have linked CO₂ emissions to global climate change, higher asthma rates, and increased mortality rates.³⁸

When Americans are empowered to work from home, this reduces or altogether eliminates the commute to and from their workplace. According to the United States Bureau of Transportation Statistics, the average American commuter travels 34.3 miles round-trip each day for work.³⁹ Connected Nation residential surveys show that teleworkers work from home 2.4 days per week on average.⁴⁰ By working from home instead of commuting to work, the average teleworker produces at least 3,000 fewer lbs. of CO₂ emissions each year.⁴¹

In 2008, CO₂ emissions were reduced by an estimated 44 billion lbs. in the United States as a result of teleworking (figure 19).⁴² To put this into context, this is equivalent to the annual carbon emissions of every household in the state of Nevada.⁴³

³⁷ "Global Warming on the Road."

http://www.edf.org/documents/5301_Globalwarmingontheroad.pdf.

³⁸ Jacobson, Mark. "On the causal link between carbon dioxide and air pollution mortality." *Geophysical Research Letters*, Vol. 35, 2008.

³⁹ Oct 2003 BTS Omnibus Survey.

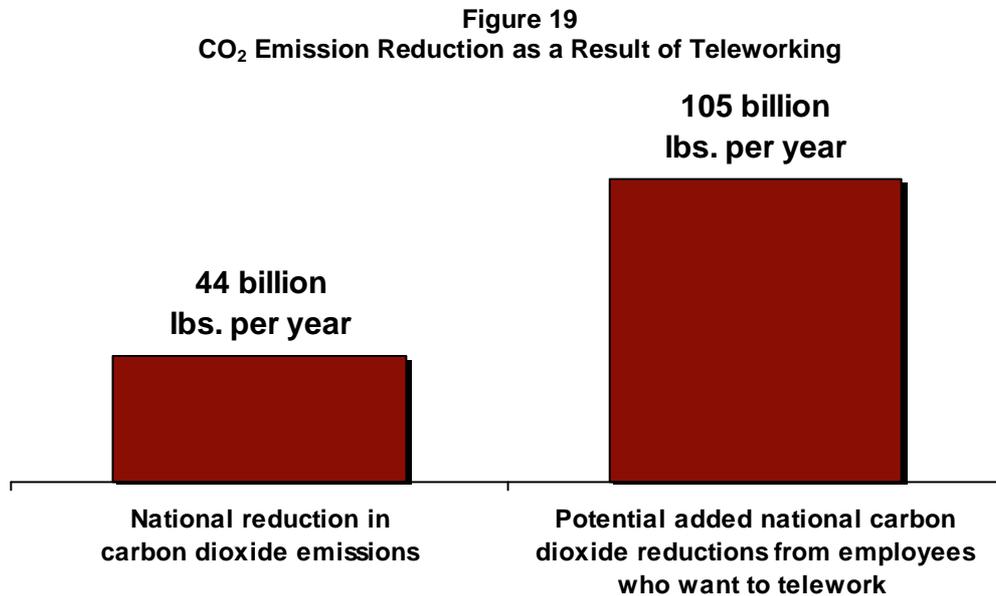
⁴⁰ n=170 OH and TN teleworkers from the 2008 Connect Ohio and Connected Tennessee Residential Technology Assessments.

⁴¹ Based on each teleworker commuting 2.4 fewer days per week, 50 weeks per year, 34.3 miles round-trip, with an average automobile efficiency of 26.6 mpg (<http://www.futurepundit.com/archives/004903.html>) producing 19.4lbs. of CO₂ emissions per gallon of fuel consumed (<http://www.epa.gov/otaq/climate/420f05001.htm>).

⁴² Based on 17.5 million current teleworkers and 35 million potential teleworkers producing over 3,000 fewer lbs. of CO₂ each year.

⁴³ Based on an average household production of approximately 41,500 lbs. of CO₂ per year. United States Environmental Protection Agency.

www.epa.gov/climatechange/emissions/ind_calculator.html and the estimated number of households in the state of Nevada (932,715) (<http://factfinder.census.gov/servlet/ADPTable>)



Moreover, if every employed adult who said they would like to telework were empowered to do so, emissions would be further reduced by 105 billion pounds of CO₂ every year. When combined with the emissions reductions from current teleworkers, that is more than the annual CO₂ emissions produced by every passenger car in the states of New York and California combined.⁴⁴

In addition to better air quality, Americans can see the savings of teleworking at the gas pumps. Every additional mile that a worker commutes means additional dollars coming out of their pocket. Telework enables workers across America to put that money to other uses and contribute to the national goal of energy independence. In 2008, teleworkers saved approximately \$5.7

⁴⁴ Based on overall Carbon emissions of 314 million metric tons or 692 billion lbs. emitted by passenger cars in 2004 (as reported by the Environmental Defense Fund http://www.edf.org/documents/5301_Globalwarmingontheroad.pdf), and approximately 28 million passenger cars in operation in New York and California (21% of the US total) (http://www.nada.org/NR/rdonlyres/0FE75B2C-69F0-4039-89FE-1366B5B86C97/0/NADADData08_no.pdf).

billion in fuel alone.⁴⁵ In addition, if every American worker who would like to telework were enabled to do so, that could result in an additional savings of over \$13.6 billion per year. This conservative estimate does not take into consideration gasoline used while passenger vehicles are stopped in traffic, nor does it include the cost of maintenance resulting from the additional miles driven or the benefits of reduced congestion or noise pollution.

Conclusion

America has a large untapped resource amongst its own workforce. This potential labor force could be realized through telework. To unleash this growth, several measures should be taken by both the private and public sectors to tap America's potential telework force.

Businesses that have not done so already should implement telework policies across their organizations. Businesses with telework policies in place should promote those policies and address potential barriers among managers who may be hesitant to allow their employees to telework. By doing so, the private sector will increase its access to talent and will help America's workforce reach its full potential.

Just as important, policymakers have an opportunity to build national, state, and local telework policies. The first step is for the Commission to strive for a fast, reliable, secure broadband infrastructure by addressing both supply and demand barriers to provide broadband for every American community. With

⁴⁵ Based on average commute of 34.3 miles per day, 2.4 days per week for 50 weeks, and an average fuel efficiency of 26.6 mpg and gasoline price of \$2.524 per gallon (as reported on 6/1/2009
http://www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_home_page.html)

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the authorization and implementation of the Commission's National Broadband Plan, the federal government has the opportunity to provide local companies and government agencies with the necessary tools to make this a reality.

Respectfully submitted,

Connected Nation, Inc.
444 North Capitol Street, Suite 224
Washington, DC 20001
877-846-7710

September 22, 2009