

**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)	

COMMENTS – NBP PUBLIC NOTICE #23

**COMMENTS OF AT&T INC. ON THE REPORT OF THE
COLUMBIA INSTITUTE FOR TELE-INFORMATION**

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INTRODUCTION AND SUMMARY

On the basis of a careful, objective, and well-documented survey of publicly available sources – one that, as a result of these characteristics, is entitled to considerable weight – the Report of the Columbia Institute for Tele-Information (“CITI”)¹ reaches three central conclusions that bear directly on the Commission’s formulation of a National Broadband Plan:

- *First*, under current projections, within the next three to four years, broadband service providers will deploy next-generation broadband networks capable of supporting significantly higher speeds to approximately 90% of all U.S. households.
- *Second*, deployment of wired broadband infrastructure to the remaining 10% will be difficult, expensive, and unlikely to occur in the absence of government support.
- *Third*, broadband service adoption lags substantially behind availability and will continue to do so for the foreseeable future – again, in the absence of government support.

These three amply supported conclusions help provide a clear road map for reaching Congress’s goal of broadband for “all people of the United States.”² As to broadband deployment, the Report makes clear that broadband providers are investing billions to expand their networks and to bring fast, reliable broadband service to American households. Particularly in light of the importance of this investment as the nation seeks to regain its economic footing – both to spur job growth and to unleash the economic potential that comes with widespread broadband deployment – the Commission should facilitate those efforts by providing regulatory certainty and stability. Indeed, rather than embracing new and untested regulatory “solutions” to hypothetical problems that would undermine certainty and diminish investment, the Commission

¹ See Robert C. Atkinson & Ivy E. Schultz, Columbia Inst. for Tele-Info., *Broadband in America: Where It Is and Where It Is Going* (Nov. 11, 2009) (“Report”).

² American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(k)(2), 123 Stat. 115, 516 (to be codified at 47 U.S.C. § 1305).

should train its fire on the overriding federal objective of *ubiquitous* broadband deployment, by directing substantial efforts toward the 10% of U.S. households that, as a result of high costs, are not served today and likely will not be tomorrow. That means developing targeted funding solutions to ensure that those living in remote areas of the country – *i.e.*, in areas where the private sector alone is unable to shoulder the financial burdens of deploying broadband facilities – have available at least a baseline level of broadband capability. Finally, the Commission must direct substantial resources at demand-side measures – such as enhanced technological literacy and more affordable computers – that will close the gap between broadband access and broadband adoption and achieve Congress’s objective of “maximum utilization of broadband infrastructure and service.”³

I. THE REPORT PROVIDES A COMPREHENSIVE SURVEY AND ANALYSIS OF PUBLICLY ANNOUNCED BROADBAND DEPLOYMENTS

The Public Notice asks commenters to address, first, whether the Report “accomplish[es] its intended purposes.”⁴ It does. The Commission requested that CITI “conduct an independent, outside expert review of projected deployment of new and upgraded networks,” by “analy[zing] . . . the public statements of companies as to their future plans to deploy and upgrade broadband networks, as well as evaluat[ing] the relationship between previous such announcements and actual deployment.”⁵ The Report does exactly that, presenting a comprehensive survey and analysis of broadband providers’ projections and gauging the reliability of those projections through backward-looking assessments of the reliability of prior projections.

³ *Id.* § 6001(k)(2)(B), 123 Stat. 516.

⁴ Public Notice, *Comments Sought on Network Deployment Study Conducted by the Columbia Institute for Tele-Information*, NBP Public Notice # 23, GN Docket Nos. 09-47 *et al.*, DA 09-2458, at 1 (FCC rel. Nov. 20, 2009) (“Public Notice”).

⁵ *Id.*

First, the Report presents a comprehensive, well-documented summary of U.S. broadband providers' broadband plans. And its central conclusions are clear: based on company projections, by 2013-14, more than 95% of American households will have access to some form of broadband – whether riding over fiber, copper, wireless, cable, or satellite – and approximately 90% will have access to broadband with advertised downstream speeds substantially higher than those widely available today.⁶ In addition, the “majority of American homes will have the choice of two wired broadband services,” while numerous national and regional providers plan to offer a variety of third- and fourth-generation wireless broadband services offering “multi-megabit” speeds that will collectively be available to the vast majority of the U.S. population.⁷

The Report makes clear, however, that these levels of deployment will be realized only through sustained effort. For example, the Report highlights AT&T's announced plans to expand deployment of its U-verse broadband initiative, using a fiber-to-the-neighborhood architecture, to reach 30 million living units by the end of 2011.⁸ The Report also notes Verizon's announced plans to deploy a fiber-to-the-home broadband solution capable of serving 17 million locations by 2010.⁹ These two initiatives alone represent as many as 50 million locations that can expect to have available very high-speed broadband – but only if current projections are met. Likewise, many of the 92% of households that today have access to cable modem service can expect to receive advertised speeds as high as 50 mbps downstream, but only

⁶ See Report at 7.

⁷ *Id.* at 7-8, 51-53. Even if these estimates turn out to be less than perfectly accurate, they still demonstrate that broadband providers can be expected to achieve very substantial progress toward making broadband available to the overwhelming majority of U.S. households.

⁸ See *id.* at 8. AT&T estimates that it will complete this upgrade by the end of 2011.

⁹ See *id.* at 7-8.

to the extent cable providers complete their plans to upgrade the capability of their systems through ubiquitous deployment of DOCSIS 3.0.¹⁰ And, with respect to wireless broadband, consumers can expect increased speeds as second-generation wireless technology is “supplanted by third generation (3G) wireless” and, subsequently, 4G wireless technology, for which preparations are now underway – but only if these capital-intensive upgrades actually occur.¹¹

It is thus clear that the favorable projections of broadband deployment reflected in the Report will be met only if the network initiatives now planned and underway are completed. And those initiatives will only be completed if and to the extent providers continue to invest the billions upon billions of dollars necessary to realize them. According to the Report, in 2008, as the economy cratered and most industries dramatically scaled back investment, major telecommunications providers, including AT&T, invested approximately \$26 billion.¹² In 2009, as the economy worsened, these providers continued to invest comparable amounts.¹³ Similarly, wireless broadband providers invested \$19.5 billion in 2008 and were on track to invest another \$18.5 billion in 2009.¹⁴ A significant amount of this investment has been directed toward broadband deployment. AT&T, for example, has estimated that “[a]pproximately two-thirds of

¹⁰ *See id.* at 8, 28 (citing Tim McElgunn, Broadband Advisory Services (P & F), *DOCSIS 3.0 Deployment Forecast* (2009)); *see also* National Cable & Telecomms. Ass’n, *Industry Data*, <http://www.ncta.com/Statistics.aspx> (as of June 2009).

¹¹ Report at 23.

¹² *See id.* at 29.

¹³ *See id.*

¹⁴ *See id.* at 30.

AT&T's 2009 investment" was directed toward "extend[ing] and enhanc[ing] the company's wireless and wired broadband networks to provide more coverage, speed and capacity."¹⁵

And therein lies the risk. The United States remains mired in the worst recession since the Great Depression. Capital expenditures throughout the economy have plummeted.¹⁶ In the face of this, the broadband industry has remained an engine of investment, growth, and stability, and it is poised to continue that role. If it does so – *i.e.*, if providers can continue to build the business case for investing the billions of dollars necessary to provide, as the Report emphasizes, very high downstream speeds to 90% of the country – the Commission will be tantalizingly close to truly ubiquitous broadband coverage, and it will be able to pour its energies into addressing funding solutions for the remaining 10% and spurring broadband adoption. But that will only happen in an environment of regulatory stability and certainty. Those attributes – which we address further below – are critical to investment in any era, and they are particularly so in the challenging economic climate facing providers today.

Indeed, the Report's analysis of the accuracy of prior broadband deployment projections – as a means to gauge the reliability of current projections – makes this point clear. According to the Report, broadband providers have a history of providing accurate projections and completing the majority of their broadband deployment projects on or ahead of schedule.¹⁷ But that is not uniformly the case. Unsurprisingly, the most capital-intensive projects – *i.e.*, those that require

¹⁵ AT&T News Release, *AT&T To Invest More Than \$17 Billion in 2009 To Drive Economic Growth* (Mar. 10, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26597>.

¹⁶ See, e.g., Timothy Horan et al., Oppenheimer Equity Research, *Key Takeaways from 3Q09* at 19 (Nov. 18, 2009); David W. Barden et al., Bank of America/Merrill Lynch, *3Q09 Telecom Results Preview and Model Book – Duck & Cover* at 13 (Oct. 14, 2009); Doug McGregor & Mark Standish, RBC Capital Markets, *Raising Capital in a New Era* at 12-13, 18 (Sept. 2009).

¹⁷ See Report at 40-41 & fig. 10.

“the deployment of entirely new infrastructures” – are the most difficult to complete and accordingly present the most uncertainty.¹⁸ As noted above, the Report’s projections are based on exactly that type of network initiative – AT&T’s U-verse initiative, for example, is an enormously expensive undertaking that involves widespread deployment of new fiber and other equipment. Furthermore, the challenging economic climate has exacerbated the uncertainty inherent in such initiatives: as the Report reveals, projects with completion dates before 2008 were more likely to be completed on time than projects with expected completion dates after the recession began.¹⁹ In short, the Report demonstrates that the Commission can expect broadband providers to deploy very high-speed broadband coverage to 90% of U.S. households within the next three to four years *only if and to the extent* broadband providers can attract private-sector investment and continue to make the business case for the massive investment necessary to meet their current projections. To the extent they cannot – for example, because regulatory action creates uncertainty and chills investment – deployment will suffer, leaving more households without access to broadband and forcing the government to expend more resources and to take a larger role in order to meet Congress’s goal of ubiquitous deployment.

II. THE REPORT PROVIDES A COMPLETE AND OBJECTIVE SURVEY OF AT&T’S BROADBAND DEPLOYMENT PLANS

The Public Notice also asks commenters to address whether the Report “provide[s] a complete and objective survey and review of the subject matter.”²⁰ With respect to AT&T, the Report provides a generally accurate description of AT&T’s current broadband facilities, services, planned investment, and projections. As noted above, the Report accurately states that

¹⁸ *Id.* at 40.

¹⁹ *See id.* at 41 fig. 10.

²⁰ Public Notice at 1.

AT&T is in the midst of a substantial fiber deployment initiative that, by the end of 2011, is projected to result in U-verse availability to 30 million living units. The Report is also correct in stating that AT&T's 3G mobile broadband network is available in nearly 350 major metropolitan areas and that there are plans to deploy to 20 additional areas and to add 2,000 new cell sites by the end of 2009.²¹ Further, AT&T plans to provide 100% of its HSPA+ cell sites with fiber by the second half of 2011.²²

The Report's summary of AT&T's plans does, however, contain a few minor factual inaccuracies. The Report states that AT&T advertises a downstream speed of 18 mbps with U-verse but suggests that the actual speed can be lower depending on the distance between the fiber-fed node and the customer premise.²³ Although the speed of the U-verse high-speed Internet access product can be affected by certain factors (such as congestion in the backbone, or whether the subscriber is watching television and surfing the Internet simultaneously), the distance between the node and the customer premise is not one of them: AT&T's engineering of the U-verse deployment is intended to address that concern.²⁴ The Report also provides inconsistent figures for wireline providers' Average Revenue Per User ("ARPU") for DSL-based

²¹ The Report incorrectly states this figure as 2,100 new cell sites. *See Report at 27.*

²² *See id.*

²³ *See id.* at 8, 17.

²⁴ AT&T believes that the Report may contain a somewhat dated statement in its background discussion of the bandwidth requirements for high definition television. *See id.* at 50 and Fig. 13. The Report suggests that high definition television "will require between 9 and 19 Mbps with 12 Mbps typical." While these may be accurate bandwidth requirements for high definition television encoded using older MPEG-2 compression protocols, more modern MPEG-4 AVC/H.264 protocols reduce these requirements by roughly half. *See Ajay Luthra, Motorola, MPEG-4 AVC/H.264: Digital Video Compression Standard*, available at: <http://broadband.motorola.com/business/ipvideo/mpeg/index.html?localeId=33>.

broadband Internet access service, reporting the figure alternately as \$31 and \$36.²⁵ According to the source the Report cites, the former figure, \$31, is accurate.²⁶

These minor inaccuracies do not, however, undermine the Report's analysis. The Report's discussion of AT&T's projections and other data is largely accurate and demonstrates that AT&T, like other broadband providers, is investing heavily to deploy broadband on a widespread basis.

III. THE COMMISSION SHOULD GIVE CONSIDERABLE WEIGHT TO THE REPORT AS IT DEVELOPS A NATIONAL BROADBAND PLAN

Finally, the Public Notice asks “[h]ow much weight should the Commission give to this study as it develops a National Broadband Plan.”²⁷ The Commission should give the Report considerable weight. Its survey of broadband providers' projections is well-sourced and transparent, and its conclusions flow directly from an objective review of the data collected. The Report, in short, represents precisely the sort of open, transparent, objective, and data-intensive resource the Commission has rightly identified as providing a basis for rational and responsible agency action.

First, the Report contains each of the hallmarks of an objective, reliable third-party submission. The Report begins by providing a detailed description of the task assigned to it, explaining that CITI had been asked to review broadband providers' projected deployments and

²⁵ Compare *id.* at 61 with *id.* at 33.

²⁶ See *id.* at 61 (citing John C. Hodulik et al., UBS Investment Research, *Sorting Through the Digital Transition* at 7 (Sept. 3, 2009) (“We estimate broadband ARPU remained flattish annually in 2Q, at ~\$36 per month, with the telcos at ~\$31 and cable MSOs at ~\$41 per month due to their higher-speed products.”)). The Report's estimate of AT&T's wireline broadband ARPU (\$39.61) is not supported by any citation. One analyst estimates AT&T's wireline broadband ARPU as \$30. See Jonathan Chaplin et al., Credit Suisse Equity Research, *AT&T*, at 19, Exh. 19 (Oct. 22, 2009).

²⁷ Public Notice at 1.

to evaluate whether providers typically are able to meet the goals set out in their public announcements.²⁸ The Report then describes the methodology employed to perform that task, explaining that it collected data primarily from providers' public reports and statements, news reports, and reports by investment analysts, trade associations, and research firms, while at the same time acknowledging the potential limitations of that approach (for example, the Report notes that it did not independently evaluate the validity of data reported by service providers²⁹). Finally, the Report provides abundant citation of sources, permitting the Commission and others to verify the Report's accuracy.

Second, the Report draws conclusions – amply supported by the data – that bear directly on the formulation of the National Broadband Plan. As noted at the outset, the Report reaches three central conclusions: that broadband providers are currently projecting deployment that will result in the availability of very high speed services to 90% of U.S. households; that the remaining 10% are likely to be left underserved (or even unserved) in the absence of government support; and that the substantial gap between broadband availability and adoption shows no signs of closing on its own. Independently and together, these conclusions provide valuable lessons to help guide the Commission toward fulfilling Congress's goal of ubiquitous broadband deployment.

With respect to the deployment projections of broadband providers, the lesson to be learned is the one alluded to above – *i.e.*, the Commission must at all times be mindful of the need to facilitate the robust and ongoing investment that now characterizes the industry. As summarized above, the Report makes clear that broadband providers are continuing to invest billions to bring high-speed broadband to the vast majority of Americans, even as other

²⁸ See Report at 5-6; Public Notice at 1.

²⁹ See Report at 6.

industries dramatically scale back capital expenditures in response to the challenging economic climate. These investments cannot be taken for granted. On the contrary, they are highly dependent on a number of variables, including one that is squarely within the Commission's control: the degree of regulatory certainty and stability that characterizes the industry. Commission action that creates uncertainty and instability could have a serious detrimental effect on broadband deployment. For example, the Commission has recently invited comment on proposed "net neutrality" rules that would radically reshape the deregulatory environment that now characterizes the broadband industry and could cast a cloud of uncertainty over the ability of providers to earn a return on the enormous investment necessary to deploy broadband infrastructure. AT&T will address those proposed rules in detail in that proceeding. For present purposes, it is enough to note that any regulatory action that introduces regulatory uncertainty and risk into the marketplace – a marketplace that is now characterized by massive private investment and intense competition – could significantly compromise the ability of broadband providers to meet the projections highlighted in the Report.

With respect to the 10% of U.S. households that are *not* within providers' current projected deployment of very high-speed broadband, the Report's lesson is equally clear. As the Report emphasizes, the private sector alone will not be able to shoulder the burden of extending broadband facilities to these households, and, absent government support, they are therefore likely to be left underserved or even unserved for the foreseeable future.³⁰ But that outcome is far from foreordained – the Commission can act to change it, and, if Congress's goal of ubiquitous broadband deployment is to be met, it must do so. As the Report observes,

³⁰ *See id.* at 70 ("Most new investment will be spent on increasing broadband capacity and speed in currently served areas. . . . Additional deployment of wired broadband infrastructure to remaining unserved areas will be difficult and expensive.").

“[s]ubsidies or governmental policy changes might improve the economic attractiveness of deploying wired broadband in these areas.”³¹ In this respect, AT&T has previously outlined a series of proposals to reform universal service (and the related intercarrier compensation regime) to provide support for broadband deployment.³² As AT&T has explained, the current rules were designed for an antiquated narrowband communications system and are spiraling toward collapse as communications increasingly migrate to broadband and IP-based services. Under the reforms suggested by AT&T, the Commission would shift reliance from intercarrier compensation charges to end-user charges, broadband providers would operate in a far more sustainable and predictable environment, and the Commission would fund initiatives to make deployment to remote, rural areas economically feasible. The Commission should direct its energies toward these and other targeted solutions to ensure that those living in remote areas have access to at least a baseline level of broadband capability.

Finally, the Report confirms that realization of Congress’s goals will require focused efforts not only on broadband supply, but also on demand. As the Report documents,³³ approximately 30% of American homes that have access to wireline broadband are unable or unwilling to adopt the service.³⁴ Equally alarming, this sizeable gap between availability and adoption appears to be due to factors – such as low income levels and lack of education and training – that will not change on their own. As a result, as the Report concludes, “adoption of broadband service will continue to lag substantially behind the availability of broadband for the

³¹ *Id.*

³² See Comments of AT&T Inc., *A National Broadband Plan for Our Future*, GN Docket No. 09-51, at 83-94 (FCC filed June 8, 2009) (“AT&T NBP Comments”).

³³ See Report at 59.

³⁴ See John Horrigan, Pew Internet & Am. Life Project, *Home Broadband Adoption 2009* at 3 (June 2009).

foreseeable future.”³⁵ Here too, then, the Commission must recommend action to spur demand. And, here too, AT&T has outlined in detail a number of “demand-side” proposals that would help close the gap between availability and adoption.³⁶ Education and training programs, for example, can help to ensure that all citizens recognize the financial and civic value that can come from broadband service, and financial assistance for low-income individuals can enable consumers who might otherwise be unable to enjoy service to reap the benefits of today’s broadband, on-line world. In these respects as well, Commission action will be necessary to meet Congress’s broadband goals.

CONCLUSION

The Report reflects an objective, comprehensive, and accurate survey of broadband providers’ deployment plans and includes sufficient information to permit verification of its accuracy. It is therefore worthy of consideration in the Commission’s formulation of the National Broadband Plan.

Respectfully submitted,

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³⁵ See Report at 7.

³⁶ See AT&T NBP Comments at 41-77.