

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 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 CENTURYLINK ON NBP PUBLIC NOTICE #1  
(DEFINITION OF BROADBAND)**

The Public Notice released in these dockets on August 20, 2009 seeking more detailed comment on the definition of broadband—NBP #1—reflects the Commission’s renewed focus on using empirical analysis and data to develop sound broadband policies. As a leading provider of high-quality voice, broadband and video services to consumers in rural areas and smaller cities, CenturyLink welcomes this opportunity to re-examine the current definition of broadband, which the Commission established in the context of Form 477 reporting requirements.<sup>1</sup> In NBP #1, the Commission is seeking targeted comments in three primary areas: (1) the general, form, characteristics, and performance indicators that should be included in a definition of

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<sup>1</sup> See, e.g., *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 9691 (2008).

broadband; (2) the thresholds that should be assigned to these performance indicators today; and (3) the process for reevaluating the definition over time.

Refining the current definition of broadband is only meaningful in the context of contemplated changes in broadband policy that rely upon the new definition as the standard. Any new broadband standard should take into consideration consumers' needs while balancing the network realities and challenges of providing broadband, particularly in unserved rural areas. The core issue is how the new broadband definition will affect policies to extend service into high cost, unserved markets. Therefore the Commission is right in soliciting more detailed public input on the definition of broadband and its application. Ultimately, the new definition of broadband should be viewed as a minimum standard that will likely be exceeded in the majority of markets.

From a threshold perspective, CenturyLink believes that 768 kbps is the proper definition of broadband for the Commission to utilize as its minimum standard at this time. Given all of the other initiatives this administration has underway, the definition of broadband should evolve over time as network enablement brings broadband to unserved areas. Furthermore, the Commission should revisit the broadband standard periodically but in no case more frequently than every three years while utilizing existing reporting requirements to monitor the deployment of broadband service at various speeds across the nation.

With respect to the definition of broadband, it is important to measure the actual customer's broadband experience, commonly referred to as "throughput," as opposed to advertised speeds. The Commission should, therefore, adopt a few modest modifications to the way in which the current broadband definitional framework is applied, which would be sufficient to gain an understanding and facilitate sound decision making that advances the public interest.

This can be done without imposing additional reporting requirements but may require the Commission to fine tune existing data gathering procedures. .

Specifically, (1) the Commission should modify its use of the definition of broadband to make it more customer focused by measuring throughput as opposed to advertised maximum speed; (2) with a customer-focused orientation, the current framework and the 768 kbps threshold are suitable for identifying unserved areas and promoting broadband deployment; and (3) the Commission should revisit the definition of broadband periodically but in no case more frequently than every three years and minimize changes in the definition so as to facilitate investment. Commission policy on this issue must recognize that investment and deployment require reasonable stability and predictability in regulatory treatment, particularly in areas currently unserved with broadband where the economic challenges to deployment are greatest.

**I. THE COMMISSION SHOULD MODIFY ITS USE OF THE DEFINITION OF BROADBAND TO MAKE IT MORE CUSTOMER FOCUSED BY MEASURING THROUGHPUT AS OPPOSED TO ADVERTISED MAXIMUM SPEED**

The Commission should ensure that the definition of broadband is customer focused, and measures actual experience rather than theoretical maximums. Ultimately, the reason a definition of broadband matters is because of what broadband makes possible. Broadband is not an end in itself; rather, it is an enabling technology. This distinction is particularly important in costly-to-serve rural areas, where relatively low population densities strain the ability of network engineers to economically deliver adequate broadband service. Consequently, the Commission should modify its definitions to reflect the levels of service that are delivered to customers—in network terminology, the throughput rather than the advertised maximum speed standard that is commonly used today. Similarly, the definition of broadband should be clarified in terms of

where it is measured so that it best reflects throughput—actual customer experience—while minimizing reporting burdens.

CenturyLink submits that the most important performance indicator from a customer perspective is the average downstream throughput. Therefore, network providers could make available to customers an industry standard network performance tool, such as a “speed test” link on their web sites that would permit customers to test the performance of the network operated by their broadband provider. As the definition of broadband should be customer-focused, it should not require symmetrical throughput both to and from the customer premises. This reflects the interests of most residential consumers, particularly in rural and unserved areas. While the degree of asymmetry may adjust over time as customers create/distribute more content, there is nearly universal agreement that, on balance, residential consumers are likely to consume substantially greater data than they produce. This is a function, in significant measure, of the fact that video programming is a substantial percentage of the traffic in residential areas.

In practice, and particularly for residential consumers, factors such as latency, jitter, etc. are largely derivative of the capacity that is available on the network. Stated another way, a measure of average throughput during times of peak usage will itself reflect most of the variation between networks with respect to these factors. Given that these other factors are themselves relatively hard to measure, CenturyLink encourages the Commission to focus its analysis at this time on properly understanding, measuring, and comparing actual customer experience—average throughput.

It is important that the definition of broadband be applied in a technologically neutral manner. This is particularly important when considering the definition from the perspective of deploying broadband in unserved areas. When looking at the minimum threshold level of

broadband to which all consumers should have access, additional factors such as mobility should not be permitted to undermine the threshold. For example, if the Commission determines that a minimum of 768 kbps throughput is necessary to provide customers with the broadband functionality they need, it would not be in consumers' interest if the standard were then relaxed for a particular technology. Accordingly, the Commission should not decide that customers in rural, unserved areas must make do with lesser speeds even if it were accompanied by the additional benefit of mobility as that would consign rural areas to a world without the functionality provided by broadband.<sup>2</sup> Ultimately, technological neutrality best serves the public interest as it focuses on the perspective of consumers, who value the quality of service over the identity of the provider or the technology employed.

Finally, while an application-based approach to defining broadband may be theoretically appealing, it is unlikely to work in practice. Networks are designed to particular levels of throughput, rather than applications per se so the specifications needed to support a particular application are translated into network performance measurements. Therefore, the Commission should refrain from developing an application-based definition of broadband, which would be cumbersome, burdensome, and likely prone to obsolescence. Instead, the Commission should look to the contemporary utilization of various applications to inform the throughput specifications that will be used in the definition of broadband.

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<sup>2</sup> While the National Telecommunications and Information Administration (NTIA) and the Rural Utilities Service (RUS) recently chose to give equal priority to applications that provided customers with mobility instead of comparable broadband capabilities, that decision was not directed at establishing a threshold level of broadband service that should be made available in unserved areas. The Recovery Act directed the Commission to make that important decision in the National Broadband Plan.

**II. WITH A CUSTOMER-FOCUSED ORIENTATION, THE CURRENT FRAMEWORK AND 768 KBPS THRESHOLD ARE SUITABLE FOR IDENTIFYING UNSERVED AREAS AND PROMOTING BROADBAND DEPLOYMENT**

The Commission is likely to find that best approach to defining broadband in the National Broadband Plan is to focus on the core purpose of making a threshold level of broadband available everywhere, including rural areas. Accordingly, it may be sensible for the Commission to focus on defining “unserved” and the level of service that should be made available in currently unserved areas rather than attempting to define broadband more broadly. As the Commission noted in its most recent order regarding broadband reporting, what constitutes broadband varies depending on the purpose for which the question is being asked.

The Commission’s current tiered approach to reporting remains sensible, particularly because broadband itself is an evolving concept, with changing technology and customer expectations. The current downstream threshold of 768 kbps, recast as a minimum average throughput would be an effective standard for defining whether an area is served or unserved. This level of network performance supports the most-commonly utilized applications and provides a broadband experience that a great many customers find satisfying. Therefore, the Commission should not classify areas satisfying this threshold as unserved. This is particularly important in rural, high-cost areas where substantially greater support is needed to provide broadband at any level.

The definition of broadband should not be static, and it should also reflect current levels of customer satisfaction. Accordingly, the current use of speed tiers is sensible and should be retained even as the interpretations and reporting levels should be clarified. As described below, however, the tiers should not be re-evaluated too frequently as this would inject uncertainty and transaction costs into the system which, in turn, would deter investment.

**III. THE COMMISSION SHOULD REVISIT THE DEFINITION OF BROADBAND PERIODICALLY BUT IN NO CASE MORE FREQUENTLY THAN EVERY THREE YEARS AND MINIMIZE CHANGES IN THE DEFINITION SO AS TO FACILITATE INVESTMENT**

The Commission should not amend or revise its broadband definitions too frequently.

Broadband facilities require considerable planning, investment, and deployment cycles, often stretching over three to five years. This process will be disrupted if the definition of broadband changes too frequently. Similarly, constant re-evaluation of the definition of broadband will introduce considerable uncertainty into the industry, which will increase the cost of capital and discourage investment. There needs to be a measure of stability in the Commission's definition in order for it to be practical and effective. Moreover, the public policy development process will be disrupted if constant modifications make time series comparisons challenging.

Accordingly, the Commission should revisit the broadband standard periodically but in no case more frequently than every three years while utilizing existing reporting requirements to monitor the deployment of broadband service at various speeds across the nation.

**IV. CONCLUSION**

The Commission should modify its use of the definition of broadband to make it more customer focused by measuring throughput as opposed to advertised maximum speed. With a customer-focused orientation, the current framework and the 768 kbps threshold are suitable for identifying unserved areas and promoting broadband deployment. Finally, the Commission should revisit the definition of broadband periodically but in no case more frequently than every three years and minimize changes in the definition so as to facilitate investment

Respectfully submitted,

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