Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act	)	GN Docket No. 09-47
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion	)	GN Docket No. 09-137

<u>REPLY COMMENTS – NBP PUBLIC NOTICE # 1</u>

REPLY COMMENTS OF VERIZON AND VERIZON WIRELESS ON DEFINING BROADBAND CAPABILITIES

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The record in response to the Commission's Public Notice confirms that no single definition of broadband will make sense for all purposes. Any effort to create a one-size fits-all definition would be unworkably complex and will fail to serve any useful purpose for policymakers or consumers. As Verizon[1] and others explained in opening comments, rather than embarking on a quixotic search for such a definition, the Commission should craft "definitions" that make sense in light of their particular policy uses. For example, the Commission should define broad national goals towards which this country's broadband marketplace and policymakers should evolve. In order to track progress towards these long term goals, on the other hand, the Commission should continue to use the speed tier categories it has already established for reporting purposes. The baseline definition the Commission adopted for that purpose is straightforward and easily applied, and it is the same definition adopted by NTIA and RUS to determine what facilities qualify as broadband for purposes of stimulus funding. This baseline will allow the Commission to track continued progress toward the goal of making at least a basic level of broadband service available nationwide, including any progress following the implementation of the stimulus program. And the additional data on speed tiers above this basic level will allow the Commission to track progress toward its longer term goal of promoting deployment of more robust broadband services. Accordingly, the combination of the current baseline definition adopted by all three agencies with the additional upstream and downstream "speed tier" data that the Commission collects will provide a textured understanding of the broadband marketplace at a very granular level.

1. Context Matters. While parties differ over the specific "thresholds" that the Commission should set (if any) in defining "broadband," the record reflects a broad

[1] In addition to Verizon Wireless, the Verizon companies participating in this filing ("Verizon") are the regulated, wholly owned subsidiaries of Verizon Communications Inc.

understanding of the significance of context.[2] Indeed, consistent with Verizon's suggested approach, many parties urge the Commission to separately define higher-speed, longer-term objectives and a lower-speed threshold definition for reporting purposes to track progress toward those long term goals. For example, the New America Foundation suggests that the Commission separately address "near-term minimums" and "longer-term goals." New America Foundation Comments at 6. *See also* Free Press Comments at 4 (suggesting that the Commission adopt a "bare-minimum threshold standard [that] should apply irrespective of technology, and should serve as a baseline for both mobile and fixed services" as well as "an aspirational definition of broadband"); Center for Democracy & Technology Comments at 3 (suggesting that policymakers separately address "thresholds or minima" as well as "policy incentives designed to motivate improvements in performance"). The Commission should sacrifice neither effective long-term policymaking nor comprehensive and realistic assessments of current services in the drive for a single, all-encompassing definition.

Because context matters in settling on any particular "definition," the Commission should reject efforts to raise the "thresholds" for its baseline definition in ways that ignore how consumers currently use their services. For example, Free Press and some others suggest that service must be symmetrical in order to be "broadband." *See, e.g.*, Free Press Comments at 2-3. While consumer demands for upstream capacity have increased over time and will likely continue to do so, such arguments ignore that most consumers still use more capacity in the

[2] *See, e.g.*, New America Foundation Comments at 6 ("it is important that the Commission does not conflate near-term minimums in a broadband definition with longer-term goals"); Free Press Comments at 10 ("there is no 'magic number' speed threshold that identifies broadband Internet access for all of the Commission's various policy purposes"); Hughes Network Systems Comments at 3 ("[I]t is exceedingly difficult to provide a definition of 'broadband' in a vacuum, without context as to how this definition will be used. It is one thing to define 'broadband' for reporting and information gathering purposes . . . It is quite another thing to define 'broadband' for eligibility or gating purposes.").

downstream direction. For example, Adtran estimates that the average household requirements for downstream capacity is 350% that of upstream capacity. Adtran Comments at 7. While consumer demand for capacity in both directions likely will continue to increase, Adtran estimates that this ratio will remain approximately the same through at least 2015. *Id.* In light of such facts, the arguments for including a symmetry requirement in the threshold definition of broadband make little sense. If providers were to configure all services in that manner, doing so could divert capacity to the upstream that consumers might find more useful in the other direction. In any event, consumers themselves should make those choices, and providers will respond with additional upstream capacity when the demand is present. For example, Verizon already offers services over its FiOS network that allow 20 Mbps of upstream capacity, and it will continue to increase upstream capacity or otherwise structure its services in ways that make sense for its customers.

The Commission should also reject Free Press's suggestion that "symmetry" is a legal requirement. Free Press argues that, as a matter of law, "broadband" services must be symmetrical, given definitions in the 1996 Act and in last year's Farm Bill concerning the ability to "originate and receive high-quality voice, data, graphics, and video." Free Press Comments at 2-3. While this language does suggest some level of two-way interactivity for "advanced telecommunications capability" – the term being defined in the 1996 Act – or "broadband services" as that term is used in the Farm Bill, Free Press stretches this language past the breaking point in suggesting that the ability to "originate and receive" necessarily means symmetrical services. As noted above, consumers today typically make much more use of downstream capacity, and this statutory language cannot be read to ignore the nature of consumer demand. In fact, since 1996, the Commission has never found that this statutory

language only considers symmetrical services to be broadband – much less symmetrical services that are capable of supporting upstream and downstream HD video (Free Press's other suggestion).[3] And, as noted above, such a requirement would turn a blind eye to the way in which most consumers actually use their broadband services today and the configuration of services that most benefits consumers.

2. Keep it simple. As we acknowledged in our opening comments, both broadband technology and the uses of that technology are multi-faceted. Each technological approach includes its own pluses and minuses. A fiber-based network may be able to provide next-generation broadband speeds with minimal latency, but it is not mobile and may not be economical to deploy in some areas. Satellite broadband may be ubiquitously available, but also faces inherent performance constraints such as relatively high latency. Mobile broadband services provide the benefit of mobility, but may never match the speeds possible over some wireline networks. Many of the performance characteristics of different broadband networks and services will vary constantly, depending on a wide range of factors both inside and outside of a particular provider's network. Moreover, depending on a consumer's circumstances and intended uses, each of these potential differences may prove significant, or not. Some applications need speed, others need mobility, and still others may need low levels of latency and/or low jitter. Many applications are designed to be tolerant of variations in each of these performance characteristics.

While some commenters encourage the Commission to somehow incorporate many or all of these characteristics or performance indicators in any broadband definition(s), these commenters fail to provide a practical, workable method for doing so. As we explained earlier,

[3] *See* Free Press Comments at 13-14.

in the case of "best efforts" public Internet access services, variations in the speed, latency, jitter or other attributes of a service that a consumer experiences are in a constant state of flux as a result of a wide range of factors. Consumers can affect such attributes themselves through their choices or configurations of devices, applications, or wiring. Service providers' choices of technologies, network configurations, or their ability to engage in effective network management may affect all of these factors, as can the level of overall network traffic and congestion at a point in time. The performance, configuration, and levels of congestion of other networks, routers and servers throughout the Internet also can contribute to variations in performance.

No commenter who favors more complicated, multi-variable definitions of "broadband" explains how to account for this complexity in a way that would be workable and meaningful. Nor do these commenters explain how to account for factors outside of a provider's control that affect the end-user's experience. Many performance indicators, in addition to being difficult to measure, are in a constant state of flux as a result of a mix of factors inside and outside of a network provider's control. They simply do not lend themselves to use for determining whether particular services are or are not "broadband." Moreover, attempting to incorporate every possible technical attribute would make any such definition more confusing and less meaningful for consumers and policymakers.

Defining broadband by including multiple performance indicators also serves little purpose. There is no indication that consumers are routinely suffering from poor performance as a result of high levels of latency or jitter or other factors – much less as a result of factors attributable to their broadband providers. Indeed, Free Press notes that "[c]able modem, DSL and fiber optic connections routinely deliver latencies below 100 ms" – the level that Free Press cites as facilitating "quality real-time voice or video." Free Press Comments at 7. Moreover,

tools exist or are being developed to allow consumers to test the performance of their service at particular points in time. *See, e.g.,* Google Comments at 9-10 (discussing measurement tools available to consumers). In light of this, there is no good cause to complicate the Commission's efforts by including such factors in the threshold definition of broadband.

3. Do Not Be Distracted By Ancillary Issues. Finally, the Commission should reject the efforts of some parties to inject ancillary policy issues into the exercise of defining broadband. For example, Free Press suggests that compliance with the Commission's *Internet Policy Statement* and notions of affordability should themselves be baked into the definition of broadband. Free Press Comments at 3. Whatever the merits of such issues, they must be considered separate and apart from any "definition" of broadband. Whether "defining" broadband for tracking/reporting purposes or for setting longer-term national objectives, injecting separate (and often amorphous) policy issues into what should fundamentally be an objective, technical definition would serve no useful purpose and would further complicate the Commission's task of crafting workable "definitions" for its various policy purposes. Issues such as affordability and the need (or lack thereof) for net regulation should be considered separately on their own merits.

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