



WIRELESS COMMUNICATIONS ASSOCIATION

**Comments on the**  
**American Recovery and Reinvestment Act**  
**Broadband Initiatives**

**of the National Telecommunications and Information Administration and**  
**the Rural Utilities Service**

Docket No. 090309298-9299-01

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## EXECUTIVE SUMMARY

The Wireless Communications Association International (“WCAI”) agrees with the Consumers Union and Consumers Federation of America that building mobile wireless broadband networks “should be the first thing we do to provision broadband in un- and under-served areas.”<sup>1</sup> Unlike fixed services, mobile wireless broadband provides *mobility*. The ability of mobile wireless broadband platforms to provide access everywhere, all the time, to consumers, firefighters, doctors, and educators is critical to productivity, public safety, health care, and education. Today’s mobile technologies are also capable of speeds supporting “the vast majority of uses critical to economic and social participation in cyberspace.”<sup>2</sup> Unlike wired networks, mobile wireless broadband networks have the ability to deliver a “two-fer” – “good mobile and good broadband service with one investment.”<sup>3</sup>

Wireless technology is also the most cost-efficient means of providing affordable “last” and “middle mile” broadband both to sparsely populated rural areas and urban centers. Wireless broadband networks can be built quickly, and due to their low cost, they are sustainable and more affordable than wired networks. Wireless broadband networks are also critical to attracting investment, spurring innovation, and increasing productivity. Mobility’s combination of these attributes has been deemed “an economic recovery triple play.”<sup>4</sup> The combination

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<sup>1</sup> Comments of the Consumer Federation of American and Consumers Union, Report on Rural Broadband Strategy, GN Docket No. 09-29 (FCC) at 4 (filed March 25, 2009).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> Tom Wheeler, *The Wireless Way Out*, TMCnet.com (March 26, 2009).

of all these attributes will result in massive job creation when wireless broadband networks receive ARRA funding.

To achieve these benefits and maximize every stimulus funding dollar, WCAI recommends that the National Telecommunications and Information Administration (“NTIA”) and the Rural Utilities Service (“RUS”) (together, the “Agencies”) implement the following strategies as part of their broadband initiatives.

### **Definitions**

- The Agencies should consider relevant broadband product markets when defining “unserved,” “underserved,” and “rural economic development.”
  - Mobile wireless and fixed broadband services comprise separate product markets.
  - Because mobile wireless broadband service is a separate product market, NTIA should define areas in which mobile wireless broadband service is unavailable as “unserved.”
  - For the same reason, RUS should define areas in which mobile wireless broadband service is unavailable as lacking sufficient “high speed broadband service to facilitate rural economic development.”
  - Considering relevant broadband product markets will yield the most technologically neutral results.
- The Agencies should consider separate speeds for mobile wireless broadband networks.

- When establishing a threshold speed for mobile wireless broadband networks (either in terms of definitions or as part of an application scoring system), the Agencies should use the fastest “shovel ready” mobile wireless broadband speeds without reference to speeds offered in other product markets by other technologies.
- The Agencies should not require symmetrical threshold speeds for mobile wireless broadband networks.
- NTIA should define areas in which mobile wireless broadband service capable of delivering at least 3 mbps downlink and 768 kbps uplink speeds is unavailable as “underserved.”

### **Selection Criteria**

- The Agencies should reject requests to limit initial rounds of funding to “unserved” areas only and instead consider both “unserved” and “underserved” areas simultaneously.
- Projects that receive funding should represent the optimal mix of capabilities and cost.
- The Agencies’ application selection criteria should consider whether multiple purposes or product markets would be served by an application.
- The Agencies should provide funding to “middle mile” only projects where appropriate, because delivering broadband to end users often requires a complementary backhaul solution.

## **State Role**

- The Agencies should give substantial consideration to the views of the States, but the Agencies should not delegate wholesale their responsibility to review and rank applications.
- The “State” role should include local communities, tribes, and other government institutions.

## **INTRODUCTION**

WCAI,<sup>5</sup> the trade association of the wireless broadband industry, submits these comments on the Public Notice released by NTIA and RUS in this proceeding on March 12, 2009 (the “Joint Public Notice”).<sup>6</sup>

WCAI commends the Agencies’ adoption of an open and inclusive process for soliciting public comment on how to best implement the broadband funding provisions in Section 6001 of the American Recovery and Reinvestment Act of 2009 (“ARRA”).<sup>7</sup> With ARRA funding, the members of WCAI will be able to accelerate broadband deployment to unserved and underserved areas, create and sustain jobs, and connect public institutions to the Internet.<sup>8</sup> Accordingly, WCAI has a direct and

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<sup>5</sup> WCAI is also a member of the group of carrier trade associations asked to speak jointly on behalf of wireline, wireless and satellite carriers during the “roundtable” phase of the public comment process. The other members are the National Cable & Telecommunications Association (NCTA), the United States Telecom Association (US Telecom), the Independent Telephone and Telecommunications Alliance (ITTA), CTIA – The Wireless Association, and the Satellite Industry Association (SIA). The views expressed on behalf of the carrier association group during the roundtable phase represent those on which the group’s members were able to reach consensus. The views expressed in these written comments are those of WCAI alone.

<sup>6</sup> See Joint Request for Information and Notice of Public Meetings, Department of Commerce *et al.*, 74 Fed. Reg. 10716 (rel. March 12, 2009).

<sup>7</sup> See H.R. 1, 111<sup>th</sup> Cong. 1<sup>st</sup> Sess., § 6001.

<sup>8</sup> See, e.g., Joint Public Notice, 74 Fed. Reg. at 10717 (“The purposes of the BTOP include accelerating broadband deployment in unserved and underserved areas and ensuring that strategic institutions that are likely to create jobs or provide significant public benefits have broadband connections.”).

immediate interest in the Agencies' funding criteria and application procedures, and offers these comments in an attempt to assist the Agencies in their efforts to implement the ARRA.

Broadband access policies have historically focused on wired platforms. Although wired platforms will continue to play an important role in broadband access, wireless platforms should play a leading role in stimulating the economy. Wireless broadband platforms (both "last" and "middle" mile) can overcome many of the challenges of bringing wired broadband to rural and underserved communities by offering a more cost-efficient alternative to prohibitively expensive wired builds. Wireless broadband platforms also provide a robust, viable competitor to wired service platforms -- leading to numerous consumer benefits, including reduced prices, increased consumer choice, and fierce, disruptive innovation. But wireless platforms offer more than simply an alternative to wired platforms for broadband connectivity at *home*. As the only broadband platform that is capable of providing access everywhere, all the time, mobile wireless broadband platforms offer mobility – a connection to every *person* whether at home or on the go. These capabilities make wireless broadband essential to maximizing the impact of stimulus funding and achieving universal broadband connectivity.

## DISCUSSION

### Definitions

**A. The Agencies should consider relevant broadband product markets when defining “unserved,” “underserved,” and “rural economic development.”**

The ARRA does not define “unserved area,” “underserved area,” or “rural economic development” for the purpose of determining how and to whom the Agencies should distribute ARRA funding. To ensure that ARRA funding satisfies actual consumer demand (and increases actual subscribership), the Agencies should consider the different broadband product markets separately when defining these terms. Specifically, NTIA should define areas in which mobile wireless broadband is unavailable as “unserved” (even if fixed broadband is available).<sup>9</sup> Similarly, RUS should consider an area without mobile broadband access as lacking sufficient “high speed broadband service to facilitate rural economic development.”

In this proceeding there seems to be a misperception that, with the advent of IP-enabled services, all communications services now participate in a single “broadband” product market. During the roundtable phase of the public comment period, many commenters appeared to assume that the *only* differentiator of broadband services is speed. Indeed, some commenters seemed to believe this view was required by technological neutrality. There is no existing precedent to support these views and no evidence that consumers actually perceive their choices so simplistically. Rather, “broadband” services are comprised of different product

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<sup>9</sup> See Joint Public Notice, 74 Fed. Reg. at 10719, Question 13(a) (“For purposes of the BTOP, how should NTIA, in consultation with the FCC, define the terms ‘unserved area’ and ‘underserved area?’”).

markets that offer consumers different *capabilities*, irrespective of the broadband speed provided or the technology used.

Congress recognized this in Section 6001(h) of the ARRA, which requires NTIA to evaluate proposed broadband infrastructure projects by considering important factors other than speed. These factors include increasing broadband affordability and subscribership and enhancing service for health care delivery, education, or children to the greatest population of users in an area. Regarding speed, Congress also directed NTIA to “take into consideration the technical differences between wireless and wireline networks, and consider the actual speeds that broadband networks are able to deliver to consumers under a variety of circumstances.”<sup>10</sup> In economic terms, however, the differences between wireless and wired networks are more than purely technical or speed-related – the ability of wireless networks to offer mobility places mobile wireless broadband in an entirely separate *product market*.

Fortunately, there is no need for the Agencies to define the relevant broadband product markets anew to implement the ARRA. As noted in the Joint PN, “[t]he Conference Report on the Recovery Act states that NTIA should consult with the FCC on defining the terms ‘unserved area,’ ‘underserved area,’ and ‘broadband.’” And as noted below, the FCC has already delineated between mobile and fixed broadband product markets in the context of its orders addressing various merger and other transactions. The Agencies should rely on this body of precedent when implementing the ARRA.

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<sup>10</sup> Conference Report at H1514.

**a. Mobile wireless and fixed broadband services comprise separate product markets.**

“A relevant market includes ‘all products that consumers consider reasonably interchangeable for the same purposes.’”<sup>11</sup> In areas where both fixed and mobile wireless broadband are available, consumers commonly subscribe to both, which suggests that fixed and mobile broadband are different products.<sup>12</sup> In the *Cingular-AT&T Order*, the Federal Communications Commission (“FCC”) found:

few customers would substitute other telecommunication services, such as wireline services, for mobile telephony services. Customers of mobile telephony services are unlikely to find wireline services to be close substitutes because wireline services *lack the mobility dimension* of wireless services. However, some consumers may find wireless services to be a good substitute for wireline service.<sup>13</sup>

Subsequently, in the *Sprint-Clearwire Order*,<sup>14</sup> the FCC found that there were separate product markets for (1) mobile telephony/broadband services and (2) fixed broadband services. Specifically, the FCC determined that the combined product market for mobile telephony/broadband services includes mobile telephony services and emerging, next-generation mobile wireless broadband

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<sup>11</sup> *Sprint Nextel Order*, 20 FCC Rcd 13967, para. 39 (2005) (quoting *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 395 (1956)). In the economic literature, a relevant product market is defined as the smallest group of competing products or services for which a hypothetical monopolist in a geographic area could profitably impose at least a “small but significant and non-transitory price increase,” presuming no change in the terms of sale of other products. *Id.* Product market analysis is used in evaluating the potential for competitive harm as a result of a merger or other transaction because the “level of competition depends on what products or services are substitutes for each other.” *Applications of AT&T Wireless Services, Inc.*, Transferor, and Cingular Wireless, Corp., Transferee, Memorandum Opinion and Order, 19 FCC Rcd 21522, para. 57 (2004) (“*Cingular-AT&T Order*”).

<sup>12</sup> See Comments of the Consumer Federation of American and Consumers Union, Report on Rural Broadband Strategy, GN Docket No. 09-29 (FCC) at 5-6 (filed March 25, 2009).

<sup>13</sup> *Cingular-AT&T Order*, 19 FCC Rcd 21522, para. 74, fn. 267 (emphasis added).

<sup>14</sup> *Id.* at para. 26.

services.<sup>15</sup> Conversely, the FCC defined the fixed broadband services market consistent with previous definitions applied in the fixed service context, which exclude mobility.<sup>16</sup>

**b. NTIA should define areas in which mobile wireless broadband service is unavailable as “unserved.”**

Against this backdrop, it is evident that a market cannot be viewed as “served” in any meaningful sense when consumers have access to fixed broadband service but lack access to mobile wireless broadband service. Otherwise, these consumers would be forced to forgo the full benefits and capabilities of broadband access enjoyed by consumers in markets with access to *all* broadband product markets – *i.e.*, “served” markets. If all Americans are to have access to broadband comparable to that available in served markets, then all consumers must have access to both fixed and mobile broadband services. Accordingly, NTIA should define areas in which mobile broadband is unavailable as “unserved.” Anything less would leave consumers and small businesses in such areas at a continuing disadvantage to their “served” counterparts.

**c. RUS should define areas in which mobile wireless broadband service is unavailable as lacking sufficient “high speed broadband service to facilitate rural economic development.”**

For the same reason, RUS should define an area without mobile broadband access as lacking sufficient “high speed broadband service to facilitate rural economic development.” Without access to the mobile wireless broadband product market already available to urban businesses, many companies will not relocate to

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<sup>15</sup> *Id.* at para. 38.

<sup>16</sup> *Id.* at para. 46.

rural areas. Mobile wireless broadband access is also essential to the economic development of existing rural businesses. In adopting the 2008 Farm Bill, Congress was “mindful that mobile broadband technologies are applicable to farmers, ranchers, and small rural business owners.”<sup>17</sup> For example, with ubiquitous mobile access, farmers would be able to review current crop prices and obtain real-time weather updates while in the field. In implementing the ARRA, RUS should consider the availability of mobile wireless broadband services as a precondition to rural economic development.

**d. Considering relevant broadband product markets will yield the most technologically neutral results.**

In addition to ensuring that ARRA funding satisfies actual consumer demand, separately considering the different broadband product markets will yield the most technologically neutral results, as required by the ARRA.<sup>18</sup> Lumping mobile wireless broadband technologies together with fixed broadband technologies would *not* be technologically neutral. The inherent nature of mobile networks requires a balance between uplink speeds and mobility. The uplink speed of mobile devices is limited by the relatively low power of handheld devices (due to the use of battery power and limits for human exposure to radiofrequency energy), which in some cases do not even use the same radio modulation as their more powerful base-station counterparts. Considering the mobile wireless broadband separately from

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<sup>17</sup> 2008 Farm Bill, Joint Explanatory Statement of the Committee of Conference at 151.

<sup>18</sup> See § 6001(e)(1)(C) (requiring that NTIA “promote the purposes of this section in a technologically neutral manner”).

fixed broadband would account for technological differences between these product markets in a neutral manner.

**B. The Agencies should establish separate speeds for mobile wireless broadband networks.**

The Joint PN asks whether the NTIA initiative should “establish different threshold speeds for different technology platforms.” To the extent the Agencies establish threshold speeds, the answer is “yes.” As noted above, for mobile wireless broadband networks, this is not the most relevant question, since those networks serve a different product market. Moreover, even the most advanced mobile wireless networks must balance speed with mobility. Thus, when establishing a threshold speed for mobile wireless broadband (either in terms of definitions or as part of an application point system), the Agencies should rely on the fastest “shovel ready” mobile wireless broadband speeds without reference to speeds offered in other product markets by other technologies.

Some commenters have suggested that the Agencies establish symmetrical speed thresholds. Even if the Agencies find these suggestions persuasive as applied to fixed networks, the Agencies should not require symmetrical threshold speeds for mobile wireless broadband networks. Requiring symmetrical speeds for all product markets would disserve consumers and would not be technology neutral. As noted above, mobile uplink speeds are limited by the relatively low power of mobile devices. Requiring symmetrical speeds may thus have the effect of *lowering* downlink speeds in mobile wireless broadband networks rather than raising uplink speeds.

**C. NTIA should define areas in which mobile wireless broadband service capable of delivering at least 3 mbps downlink and 768 kbps uplink speeds is unavailable as “underserved.”**

NTIA should use a speed threshold to determine whether an area is “underserved.” Specifically, NTIA should declare that a market will be deemed “underserved” if the market does not have access to mobile wireless broadband capable of delivering at least 3 mbps downlink and 768 kbps uplink speeds.

Currently available mobile broadband networks support 3 mbps downlink and 768 kbps uplink speeds. These speeds represent the fastest “shovel ready” mobile wireless broadband speeds available. A minimum standard of 3 mbps downlink and 768 kbps uplink will thus create and maintain jobs while ensuring that consumers receive improved service. WCAI also believes these are the minimum speed levels that consumers would deem acceptable for mobile wireless broadband service in today’s marketplace. Anything less will not satisfy the growing demand for faster mobile broadband connections capable of accommodating an ever widening variety of broadband-based applications.

Using this speed threshold to define “underserved” areas will also help ensure that funding will “provide *improved* access to broadband service to consumers residing in underserved areas” in accordance with Section 6001(a)(2) of the ARRA.<sup>19</sup> To fulfill this purpose, mobile wireless broadband networks built in underserved areas with federal funding should provide a state-of-the-art experience without exceeding what is currently possible. Speeds of at least 3 mbps downlink and 768 kbps uplink accomplish both goals.

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<sup>19</sup> Emphasis added.

## **Selection Criteria**

### **D. The Agencies should reject requests to limit initial rounds of funding to “unserved” areas only and instead consider both “unserved” and “underserved” areas simultaneously.**

Some commenters have suggested that the Agencies initially provide funding only for infrastructure investment in “unserved” areas. Although these suggestions are well intentioned, focusing the initial rounds of funding on only unserved areas would be inconsistent with the plain language of the statute and could delay or deny vital broadband services to populations specifically targeted for assistance by Congress. The Agencies should instead consider both “underserved” and “unserved” areas simultaneously.

Nothing in the ARRA indicates that the Agencies should focus their funding efforts primarily on “unserved” areas. To the contrary, the ARRA gives equal weight to both “underserved” and “unserved” areas, and for good reason. A commitment to focus exclusively on “unserved” areas first may have unintended consequences. For example, if the first round of applications is for a particular amount of funding and limited to “unserved” areas only, the Agencies may be pressured into granting applications for projects simply to meet the stated funding quota for “unserved” areas, including projects that may ultimately be unsustainable. Using the majority of available funding to serve a relatively small population in “unserved” areas may also yield less overall public interest benefit than balancing the use of the funds across both “unserved” and “underserved” areas. The Agencies should avoid these potential pitfalls and reject requests to limit initial rounds of funding to “unserved” areas only.

**E. Projects that receive funding should represent the optimal mix of capabilities and cost.**

There is a limited amount of broadband stimulus funding available for the Agencies to meet Congress' goal of providing high-quality, affordable broadband service to the greatest population of users. Given this Congressional goal, the most cost-effective and technologically neutral way for the Agencies to choose among competing applications is to consider which stimulus projects will best serve the stated legislative objectives at the lowest possible cost and as expeditiously as possible. Projects that receive funding should represent the optimal mix of capabilities, cost, and price advantages – including affordability, subscribership, speed, mobility (or nomadicity), low service/subscription price, guaranteed initial pricing period, low equipment price, interoperable equipment, size of service footprint, and other societal goals (*e.g.*, health care delivery, public safety, education, or children).

**F. The Agencies' application selection criteria should consider whether multiple purposes or product markets would be served by an application.**

Given the various purposes in the ARRA, it may be difficult to compare applications in different product markets or that are focused on only one ARRA purpose. For this reason, some commenters have suggested that separate scoring criteria be used for different types of applications – *i.e.*, that separate criteria be used for “last-mile” projects to serve business and residential consumers, “middle mile” projects, public safety projects, *etc.* It is possible, however, that multiple purposes or product markets may be served by a *single* project. For example, a single mobile wireless broadband project may be capable of providing “last mile,”

“middle mile,” and public safety services. WCAI proposes that applications serve multiple purposes or product markets receive additional “points” during the application review process.

**G. The Agencies should provide funding to “middle mile” only projects when appropriate.**

Although to date most commenters have directed their comments toward end-user projects, many commenters have also recognized the importance of broadband-capable backhaul networks to the broadband ecosystem. For example, without broadband-capable backhaul, mobile wireless broadband networks cannot provide the desired level of mobile broadband service to the end user. Although end-user projects may include self-provisioned backhaul or transport, some applicants may propose stand-alone backhaul or transport projects.

Fixed wireless backhaul or transport typically offers superior economics and flexibility in unserved and underserved areas, especially for connections at speeds of less than 2 gbps. Low end trenched fiber costs start anywhere from \$10 to \$35 per foot. Fixed wireless typically offers connectivity at a fraction of that cost. For this reason, when considering applications for various types of projects, the Agencies should provide funding to “middle mile” only projects where appropriate, including fixed wireless backhaul or transport projects.

**State Role**

**H. The Agencies should give substantial consideration to the views of the States, but the Agencies should not delegate wholesale their responsibility to review and rank applications.**

The Agencies should not delegate wholesale their responsibility to review and rank applications to the States. As a legal matter, the ARRA charges the

Agencies with distributing funding, not the States. Past attempts by federal agencies to delegate entirely their authority to the States have not withstood legal scrutiny.<sup>20</sup> Delegating this important role to the States could also have unintended consequences for the Agencies. For example, the Agencies would bear the responsibility for ensuring that the funds are distributed in a fair and timely manner, but would no longer be able to control the method or timing of the distribution of the funds. The variables inherent in fifty different distribution models may result in the Agencies later submitting some unfortunate reports to Congress on the status of ARRA funding.

Although the Agencies should not delegate wholesale their ARRA responsibilities, they should give substantial consideration to the views of the States when determining whether a particular area is “unserved” or “underserved” as well as during the application selection process. Congress recognized “that States have resources and a familiarity with local economic, demographic, and market conditions that could contribute to the success of the broadband grant program.”<sup>21</sup> This important role permits the States to share their considerable expertise while preserving the intent of Congress that the Agencies retain sole authority to actually approve awards.<sup>22</sup> Considering State views without completely delegating the application selection process to the States would also resolve the potential for conflicts of interest when States apply for funds themselves.

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<sup>20</sup> *United States Telecom Ass’n v. FCC*, 359 F.3d 554 (D.C. Cir. 2004), *cert. denied*, 125 S.Ct. 313, 316, 345 (2004).

<sup>21</sup> See Conference Report at H1514.

<sup>22</sup> See *id.*

**I. The “State” role should include local communities, tribes, and other government institutions.**

When considering the views of the States in accordance with ARRA, the Agencies should also consider the views of local communities, tribes, and other government institutions. These additional institutions may have particular expertise that is directly relevant to the decisions of the Agencies. For example, local public safety agencies may provide valuable insight into the type of network that would best serve their needs. Tribes, hospitals, schools, and other governmental entities may also have special insight into the needs of their communities. Expanding the “State” role to include these additional stakeholders would improve the process and best serve the public interest.

**CONCLUSION**

WCAI stands ready and willing to work with NTIA, RUS, the FCC and other industry groups to bring the ARRA application process to a successful conclusion.

Respectfully submitted,

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