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The National Digital Inclusion Alliance (NDIA) appreciates the opportunity to submit the following comments to the United States Department of Agriculture (USDA) as it considers implementation of its pilot broadband program (e-Connectivity Pilot).

About NDIA

We are leaders of local community organizations, public libraries, municipalities and other institutions working hard to reduce digital disparities among our neighbors. To improve the daily lives of all community members, we call for digital inclusion public policies that reflect our expertise and diverse experiences.

Our approach is based in the knowledge that broadband adoption is most effectively promoted by community-driven efforts combining:

- Affordable home broadband service.
- Public broadband access.
- Appropriate affordable devices.
- Locally trusted technology training and support.

NDIA represents organizations with a wide range of experience reducing the digital divide in the United States. The experiences of our affiliates include providing guidance to low-income parents connecting to their children's teachers, teaching seniors how to use their electronic health records, helping veterans learn digital skills in order to acquire a job, and enabling disabled adults to participate more fully in their communities. The services of our affiliates include digital literacy training, public Internet access, home broadband programs and digital inclusion advocacy.

NDIA currently has 355 affiliated organizations, including 42 national nonprofits and 268 local public and nonprofit organizations in 39 states, the District of Columbia and the US Virgin Islands. The full list of NDIA affiliates with links to their websites can be found at <https://digitalinclusion.org/members>.

Affordability as a factor of sufficiency

NDIA commends RUS for raising the issue of affordability as a potential factor in its definition of "sufficiency" for purposes of establishing eligibility for the e-Connectivity Pilot program. This is an important step in bringing some much-needed common sense to the national discussion of "bridging the rural digital divide", which is too often dominated by the single issue of physical network deployment.

The NOI asks commenters who believe affordability should be included in the definition of sufficiency: "What equates to consumers' costs being so high that they are effectively rendered inaccessible to rural households"?

Obviously the answer to this question is not the same for all rural consumers, any more than it would be for their urban and suburban counterparts. Millions of poor Americans live in the e-Connectivity Pilot's target market, i.e. rural areas with the nation's lowest levels of broadband access. Simply increasing the geographic reach of faster broadband service in these areas will not make it "accessible" to those households if its consumer cost represents an unsustainable share of their limited incomes.

Central cities generally enjoy near-universal high-speed home broadband access from at least one provider. But those cities also have millions of still-unconnected households, concentrated in lower-income neighborhoods.¹ As we illustrate below, the poverty which underlies digital exclusion in Cleveland, Memphis or Miami is not limited to cities. Federally subsidized broadband investments in rural America should be carefully designed to avoid reproducing this unfortunate pattern.

Poverty rates in rural U.S. counties with slow broadband access

Using data for 3,104 U.S. counties provided by Dr. Roberto Gallardo of the Purdue University Center for Regional Development,² NDIA has identified 814 counties in 44 states which had

- a) rural population percentages greater than 65% in 2010, and
- b) aggregate FCC Form 477 "Maximum Advertised Download Speeds" (MADS) below 25 Mbps in December 2016.

(The Center calculates these countywide aggregates of Form 477 Census block download speed data for its Digital Divide Index³ project.)

¹ <https://www.digitalinclusion.org/blog/2018/06/07/worst-connected-cities-2016/>

² <https://pcrd.purdue.edu/about-us/our-team/roberto-gallardo.php>

³ <https://www.pcrd.purdue.edu/signature-programs/digital-divide-index.php>



The median 2016 individual poverty rate for these highly rural, poorly connected counties was about 16.7%. 258 of the 814 counties had poverty rates above 20%, and thirty-nine had more than 30% of their residents living below the Federal poverty line. Based on the counties' respective poverty rates and their total populations reported in the 2010 Census, we estimate that individuals in poverty accounted for more than 2 million -- about 18% -- of their 12 million total residents.

136 of our 814 counties had aggregated Form 477 Maximum Advertised Download Speeds below 10 Mbps in 2016. These "worst connected" rural counties had a slightly lower median individual poverty rate (15.9%), but a higher aggregate share of all their residents living in poverty (about 160,000 out of 764,000, or 21%).

Poverty vs. broadband affordability

How poor are we talking about?

Here are the Census poverty thresholds for 2016⁴, on which the poverty rates discussed above are based:

Size of family unit	Related children under 18 years			
	None	One	Two	Three
One person (unrelated individual):				
Under age 65.....	\$12,486			
Aged 65 and older.....	\$11,511			
Two people:				
Householder under age 65.....	\$16,072	\$16,543		
Householder aged 65 and older.....	\$14,507	\$16,480		
Three people.....	\$18,774	\$19,318	\$19,337	
Four people.....	\$24,755	\$25,160	\$24,339	\$24,424

Of course these are *upper* "thresholds". Most persons counted as living in poverty are in households with less income than the thresholds suggest -- often much less.

The math facing these potential low-income rural broadband customers is daunting.

⁴

<https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html>

An *individual* living in poverty in the U.S. is, by definition, living on less than \$1,000 a month. The monthly bill that individual would currently receive from AT&T, Charter Spectrum, Comcast, Verizon, etc. for wireline Internet service at any speed above 5 Mbps down is at least \$65⁵ – in other words, more than one-sixteenth of his or her total income.

A *single parent with one child* living in poverty⁶ is supporting that child on less than \$1,400 a month. With *two children*, it's less than \$1,600. A monthly ISP bill of \$65 equals 5% or more of that family's income... one dollar out of every twenty.

For perspective, \$65 a month is about 1.4% of the U.S. median rural family income.⁷ How many median-income families would sign up for the fastest Internet in the world, if the price was 5% or 6% of their monthly incomes, i.e. \$275-\$350 a month? How many policymakers would expect them to?

But 5% to 6% of total household income is the *minimum* burden that the dominant commercial providers – and too many policymakers -- now expect low income consumers to shoulder in long-term, non-promotional rates if they want home Internet access at any speed faster than 5 Mbps down.

NDIA asserts that this high price threshold for basic home Internet access in most markets, aggravated in recent years by upward “tier flattening”,⁸ is creating a new, hard barrier to meaningful broadband adoption by all lower-income consumers, no matter where they happen to live.

NDIA responses and recommendations

With this background, NDIA offers the following direct responses and recommendations:

1. Affordability of service absolutely should be included in evaluating whether an area already has “sufficient access”. An area or community which has a technically adequate 10/1 broadband service available, but only at a price which forces a significant share of the residents to set aside 5%, 6% or more of their total incomes to pay it, should not be deemed to have “sufficient access” with respect to those residents.

⁵ See NDIA's recent white paper on “tier flattening” at <https://www.digitalinclusion.org/blog/2018/07/31/tier-flattening/>.

⁶ This could be a full time worker at the Federal minimum wage, earning almost \$1,500 less than the 2016 poverty threshold for one adult and one child.

⁷ https://www.census.gov/newsroom/blogs/random-samplings/2016/12/a_comparison_of_rura.html

⁸ <https://www.digitalinclusion.org/blog/2018/07/31/tier-flattening/>



2. Any **affordability benchmark** based on incomes is inevitably somewhat arbitrary. But given the facts of the current marketplace and the constraints RUS is working under, NDIA suggests the following approach to benchmarking affordability:

If technically adequate 10/1 broadband service is unavailable to community residents at an annual cost below X% of the community's 25th percentile household income (i.e. the median income of the jurisdiction's poorest 50% of households), then “sufficient access” does not exist for that community.

We suggest considering setting X by default at 2.5%. Then for a village or township with a 25th percentile household income of \$18,000 (i.e. the poorest 25% of households make less than \$18,000), the benchmark “affordable” rate for 10/1 Mbps service would be $\$18,000 \times 2.5\% = \450 per year or \$37.50 per month. A local provider could not claim to be providing “sufficient access”, and block program support for a competing provider, unless it offered 10/1 service at or below that price. But for a better-off jurisdiction with no poor residents and a 25th percentile household income of \$30,000, a 2.5% affordability benchmark would equal \$62.50.

Alternatively, RUS could apply the suggested affordability benchmark to the entire county or counties in which a project is proposed.

3. The NOI does not ask specifically for comments regarding RUS's standards for reviewing project applications, other than the “improvements to rural prosperity” questions outlined in point 3. However, NDIA would like to take the opportunity to suggest several possible standards for evaluating and ranking proposed projects, which could help make e-Connectivity Pilot investments more effective in promoting affordable access for lower-income consumers, promote digital inclusion and broadband adoption in general, and promote certain community benefits listed in point 3 including education and healthcare benefits:

a) Project review and approval standards should give *preference to projects whose network business plans include affordable service options for lower-income households* such as:

- substantial discount rate plans for eligible low-income households
- Lifeline broadband offerings
- availability of service for community wifi networks and other nonprofit cost-sharing initiatives to promote low-income access and adoption.

b) Preference should also be given to providers and project sponsors whose marketing



and community engagement plans include *digital inclusion support in addition to the affordability options in point a)*, such as community partnerships to provide digital literacy training and access to affordable devices.

We welcome the opportunity to further discuss these comments.

Thank you,

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