Attachment 2

**Broadband Availability Data
Comments on Proposed Information Collection**

On October 25, 2018, the National Telecommunications and Information Administration (NTIA) published a [notice in the Federal Register](#) requesting comments on NTIA's intent to collect broadband availability data at a more granular level than that available via the Federal Communications Commission (FCC) Form 477 process, pursuant to the provisions of the Paperwork Reduction Act (PRA). NTIA received nine comments in response to this notice. All nine comments contained valuable and thoughtful feedback that NTIA has considered in the course of finalizing its proposed information collection. NTIA is submitting these comments as attachments to the information collection request. NTIA summarizes and responds to each comment below.

1. NCTA

In its comments, NCTA noted that "to the extent the proposed data collection is considered a *voluntary* collection, it is necessary and useful for the performance of NTIA's duties pursuant to the 2018 Omnibus and the PRA." Further, NCTA goes on to say "given the tasks assigned to NTIA by Congress in the 2018 Omnibus, the types of information identified in the *PRA Notice* will have 'practical utility' in performing those functions."

NCTA expresses some concern over NTIA's estimate for the time burden of the proposed information collection, noting that "the burden estimate of eight hours may be plausible for some entities, but could be much higher for other entities." While acknowledging that NTIA seeks unmodified data sets from service providers – with the exception that the PII should be removed prior to transmission to NTIA – NCTA advises that three factors could increase the burden beyond NTIA's estimate: (i) large data sets; (ii) geographically-granular data sets (more granular than Census blocks); and (iii) the potential need to correlate multiple data sets. Through this program, NTIA seeks to improve data-sharing relationships with service providers and the broadband industry and appreciates NCTA's comments on our approach to the program and this voluntary data collection. NTIA intends to revise its estimate of the burden of the collection of the information in this request, based on input from NCTA and other commenters.

2. American Cable Association (ACA)

ACA noted that "[i]f the collection is voluntary and broadband providers are not required to respond, ACA does not find the burden of the collection to be unreasonable because each provider can decide whether the benefits of participating outweigh the costs."

In its comments, ACA advocates for a government-led effort to geocode the location of all housing units in the United States, since "…the government lacks the precise location of all households in the US." ACA recommends that NTIA focus on the task of developing such a database. NTIA acknowledges that there is no single database containing a complete listing of the geolocation of all U.S. households and businesses that could be served by broadband.

However, developing such a database is beyond the scope, budget, and legislative mandate of NTIA and this program. Thus, NTIA declines to adopt ACA's recommendation.

ACA also cautions that "…providers are likely to need more than eight hours to comply" with the proposed information collection, in order to "…assemble the data sets, remove PII, verify such data for accuracy, transmit the collection to NTIA, and then, where necessary, respond to NTIA inquiries about the data." In particular, ACA notes that smaller cable operators use a mix of paper-based record keeping, manual processes, and electronic mechanisms for data collection and mapping. Based on experience completing FCC Form 477 filings, ACA indicates that this variability could result in lower quality results or higher burden on the cable operators when responding to NTIA's proposed information collection. NTIA intends to revise its estimate of the burden of the collection of the information in this request, based on input from ACA and other commenters.

3. California Internet, L.P. DBA GeoLinks

GeoLinks' emphasize that current data collection and mapping efforts can lead to overstatements in broadband availability. GeoLinks supports "…the collection of more granular data to address this potential overstatement."

However, GeoLinks also expresses concern that NTIA's proposed data collection could create duplicative reporting with the FCC and cautions against the implementation of "two distinct data reporting processes that likely would yield the same or similar information." NTIA appreciates the concern about duplicative reporting and notes that the purpose of this voluntary information collection is not to duplicate the FCC's Form 477 process. Since the FCC has not completed its pending efforts to modernize Form 477, NTIA is pursuing this information collection to gather more granular broadband data in parallel with FCC activities. NTIA acknowledges that future changes in FCC reporting requirements could make this information collection unnecessary or obsolete for broadband service providers. However, it is also important to note that the scope of this data collection is broader than the FCC-regulated broadband service providers that report via Form 477. As specified in the PRA Notices, NTIA is also seeking broadband availability data from private companies, non-profits, cooperatives, educational institutions, tribal governments, and local, regional, or state governments.

GeoLinks correctly states that the FCC is considering changes to its Form 477 data collection and encourages NTIA to give the FCC input as part of that process. NTIA "applauds the Commission's efforts to improve the quality, accuracy, and utility of Form 477 data" and has submitted comments to the FCC on this topic.[1] In addition, NTIA and FCC staff meet regularly to discuss broadband data, broadband mapping, and NTIA's efforts on the national broadband availability map.

Finally, GeoLinks recommends that "NTIA to use its expertise and experience to identify, compile, and analyze data available from other existing data sets" to verify and supplement Form 477 data. NTIA believes that it is already working in alignment with GeoLinks'

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[1] *In re* Modernizing the FCC Form 477 Data Program, WC Docket No. 11-10, Ex Parte Comments of the National Telecommunications and Information Administration (Jan. 2, 2018), *available at* https://www.ntia.doc.gov/fcc-filing/2018/ntia-comments-modernizing-fcc-form-477-data-program.

recommendations, as evidenced by (i) NTIA's recently-announced collaboration with eight states to contribute data to the first release of NTIA's map;[2] (ii) the scope of this information collection, which includes a variety of entities that can contribute data for comparison with FCC Form 477; and (iii) NTIA's efforts to acquire other sources of commercial data on broadband availability and usage.

4. Wireless Internet Service Provider Association (WISPA)

WISPA suggests that NTIA should work to "verify and expand" upon the results of FCC Form 477 reporting "by drawing information from other pertinent datasets, such as information from State mapping efforts and other third parties." NTIA believes that it is already working in alignment with WISPA's recommendations, as evidenced by (i) NTIA's recently-announced collaboration with eight states to contribute data to the first release of NTIA's map;[3] (ii) the scope of this information collection, which includes a variety of entities that can contribute data for comparison with FCC Form 477; and (iii) NTIA's efforts to acquire other sources of commercial data on broadband availability and usage.

WISPA also expresses concern that collecting additional data from broadband service providers "would be duplicative and would add unnecessary burden to those entities that are already reporting broadband deployment data to the FCC." Given NTIA's expressed interest in data that is more granular than the current Census-block level reporting associated with FCC Form 477, WISPA also notes that "there are significant costs associated with obtaining and reporting data at the sub-census block level, especially for small providers" and "providing deployment data for fixed wireless technology is a time-consuming process." WISPA also states that "the FCC is already working to resolve the granularity shortcomings with FCC Form 477 deployment data." NTIA appreciates WISPA's concern about duplicative reporting and notes that the purpose of this voluntary information collection is not to duplicate the FCC's Form 477 process. In addition, since the FCC has not completed its pending efforts to modernize Form 477, NTIA is pursuing this information collection to gather more granular broadband data in parallel with FCC activities. NTIA acknowledges that future changes in FCC reporting requirements could make this information collection unnecessary or obsolete for broadband service providers. However, it is also important to note that the scope of this proposed data collection is broader than the FCC-regulated broadband service providers that report via Form 477. As specified in the PRA Notices, NTIA is also seeking broadband availability data from private companies, non-profits, cooperatives, educational institutions, tribal governments, and local, regional, or state governments.

WISPA also notes that "NTIA may seek to include non-facilities-based providers that are not subject to FCC Form 477 reporting." NTIA acknowledges this concern and notes that its objective is to identify and map broadband availability, regardless of whether a broadband provider in a given region is an entity subject to FCC reporting.

Next, WISPA objects to NTIA's suggestion that industry associations submit broadband availability data, indicating that "as a small trade association, WISPA does not have the human

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[2] NTIA Partners with 8 States on Improvements to Broadband Availability Map (Feb. 12, 2019), https://www.ntia.doc.gov/press-release/2019/ntia-partners-8-states-improvements-broadband-availability-map.
[3] *Id*.

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or financial resources to undertake such a responsibility." NTIA acknowledges this concern and clarifies that: (i) the proposed information collection is voluntary, not mandatory; and (ii) the suggestion that an industry association may wish to contribute data is based on the data collection, mapping, and other programs that some industry associations have already implemented or are considering implementing.

WISPA also comments that NTIA may have underestimated or incorrectly assumed the number of providers that would respond to the proposed information collection, noting that the "PRA RFC estimates the number of respondents to be 600, a number that stands in stark contrast to the FCC's estimate that there are more than 3,000 broadband providers. WISPA alone has more than 800 members." NTIA clarifies that this is a voluntary data collection, and that figure of 600 represents NTIA's estimate for the number of broadband providers that would elect to participate and voluntarily submit data. WISPA challenges the burden estimate developed by NTIA, stating that "[f]or some broadband providers, it may take several hours to review their databases, determine what is PII, modify that data, reformat the data, and then submit it to NTIA." NTIA intends to revise its estimate of the burden of the collection of the information in this request, based on input from WISPA and other commenters.

Finally, WISPA notes that NTIA did not designate a specific annual reporting date in the PRA Notice and then explains how timing could increase the burden on broadband providers that also submit FCC Form 477 data, given the need to report similar data to different entities, as well as potential changes in the data sets, should reporting occur at different time. WISPA also notes that a semi-annual reporting period may be more accurate than an annual reporting period. NTIA has considered WISPA's feedback. While NTIA had initially proposed collecting data annually in in its 60-Day PRA Notice, NTIA has determined that entities should submit data to NTIA twice a year. However, the online tool will not foreclose entities from providing data to NTIA more than twice or at any time during the year.

5. Illinois Department of Innovation & Technology (Illinois DoIT)

Citing the importance of broadband to state economic development, and various "smart" programs, including lights, electrical grid, and farming, Illinois DoIT "embraces NTIA's efforts to update the national broadband map" and "supports collection of information resulting in more refined and detailed broadband availability data."

Referring to the estimated data collection burden, Illinois DoIT "believes that these estimates are likely to substantially understate the associated burden" and specifically notes that respondents to the FCC's Form 477 data collection averaged "approximately 710 hours per respondent," annually. NTIA intends to revise its estimate of the burden of the collection of the information in this request, based on input from Illinois DoIT and other commenters.

Illinois DoIT also submits a number of suggestions regarding other data sets that NTIA should collect and analyze:

> (1) other federal agencies, such as US Postal Service, USDA, and RUS broadband and electric programs; (2) states that have continued broadband mapping; (3) state network providers; (4) county and local agencies that may also be collecting or

producing such data, including E-911 maps and municipal broadband service provider data; and (5) USAC's database of information on rates and services supported by its federal support mechanisms, such as the high cost Connect America Fund, the schools and libraries support mechanism ("E-Rate"), and the rural health care support mechanisms.

NTIA is already working to inventory and potentially utilize many of the data sources suggested by Illinois DoIT, subject to program budget, schedule, and resourcing.

Illinois DoIT also recommends that NTIA work with the Census Bureau to "expand the American Community Survey (ACS) to collect additional data, such as speed, cost, and latency that can be used in augmenting the existing data sets." While NTIA works closely with Census on the ACS on its computer and internet use supplement (OMB No. 0660-0021), in this instance, Congress directed NTIA to "use this funding to acquire and display available third-party data sets," rather than sourcing additional new data, for the national broadband availability map.[4]

6. National Rural Electric Cooperative Association (NRECA)

NRECA "strongly supports NTIA's proposal to collect data at a more granular level than data collected in the FCC Form 477." To demonstrate its concern that Form 477 alone overstates broadband availability, NRECA cites an example of an electric cooperative in Iowa whose territory of mostly rural farmland was considered served based on FCC Form 477 data, since Form 477 instructs "service providers to report as served any Census block in which *any* homes or business are served by the service provider." NRECA also notes that "we reasonably believe electric cooperative participation [in Connect America Phase II] would have been higher, but for the FCC's approach to designating areas eligible for the auction… rely[ing] solely on FCC Form 477 data to determine broadband service availability, finding Census blocks with any service available as ineligible." Thus, NRECA notes that FCC Form 477 serves as a disincentive to non-traditional broadband providers, like electric cooperatives.

Regarding Geographic Information Systems (GIS) data from service providers, NRECA notes that service provides should submit GIS in a manner that describes "(a) wireless coverage areas based on a propagation model and (b) network infrastructure (such as fiber optic routes)." In addition, "NRECA recommends that service providers be required to submit GIS data to show areas they currently provide service as well as those they are committed to serve." While NTIA is proposing a voluntary data collection, it finds NRECA's recommendations interesting and will consider them as the program evolves. For example, NTIA has discussed the inclusion of grant- and loan-funded infrastructure with other federal agencies; similar to NRECA's latter point, NTIA has suggested that the government first map the planned service area associated with each program and later update the map using as-built drawings or other data that reflect work, post-deployment.

NRECA also makes several suggestions regarding broadband data verification, completeness, and accuracy. NRECA notes that "[c]ollecting data from sources beyond service providers, such as industry associations, data aggregators, and researchers that study or analyze broadband

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[4] Consolidated Appropriations Act of 2018, Public Law 115-141, Division B, Title I, 132 Stat. 348.

availability, will aid in collecting complete and accurate information." Interestingly, in the event that there is no data available for a particular region, NRECA suggests:

> NTIA deem the areas as "unserved" for the purposes of broadband availability data. NRECA believes it is more harmful to err on the side of an area being "served" rather than "unserved", as it minimizes the likelihood of unserved areas being deemed ineligible for the funding necessary to obtain broadband service. This policy would also incentivize providers to thoroughly report the served and unserved locations in their service areas, increasing the completeness and accuracy of the data collected.

NTIA notes that validation is beyond the scope of its legislative authorization for the national broadband availability map. However, NTIA has considered various policies to support the verification and validation of broadband availability, including state input, field testing, crowdsourcing, algorithms to compare multiple data sets, and other approaches. NTIA will consider NRECA's recommendations when evaluating its options.

In addition, NRECA suggests an education and assistance program for service providers under this program. Citing the FCC's Form 477 educational program, NRECA recommends a series of webinars that NTIA can "establish an educational program for service providers that clearly explains what data must be submitted and how it must be submitted." Although NTIA is proposing a voluntary information collection, NRECA's recommendation on this subject is very interesting. NTIA is proposing to collect data from any entities, per the PRA Notices (broadband service providers, private companies, non-profits, cooperatives, educational institutions, tribal governments, and local, regional, or state governments). Many of these entities, particularly those that do not typically participate in the FCC's Form 477 process or other data collection efforts, may benefit from educational webinars explaining the data collection.

7. Central Alabama Electric Cooperative (CAEC)

CAEC supports NTIA's efforts to map broadband availability and "CAEC believes that the proposed collection of information is necessary for the proper performance of the functions of NTIA." CAEC states that "economic development depends on the internet" while noting challenges faced by rural counties and business in Alabama when broadband internet access is not available. Referring to the use of FCC Form 477 data to determine grant eligibility criteria, CAEC says:

> the collection of said data is necessary and relevant. More accurate data needs to be gathered to that unserved portions of census blocks previously deemed 'served' by the FCC can actually receive fixed broadband. The census block methodology coupled with mobile broadband counting as served has eliminated many needed and worthy grant projects from funding.

Regarding NTIA's estimate of the burden to submit data for this collection, CAEC indicates that "[w]e believe that it will actually take between 12 and 16 hours annually." NTIA intends to revise its estimate of the burden of the collection of the information in this request, based on input from CAEC and other commenters.

In response to NTIA's statements on the quality, utility, and clarity of the information to be collected, CAEC states that the "highest quality and most useful data would be in both map and spreadsheet format and would include every residence, business and parcel of land and what type of service is or is not available, at what speed and by which provider." NTIA is proposing a voluntary data collection and intends to work with stakeholders to utilize whatever geographically granular data they make available. NTIA believes that CAEC proposes a very granular target but believes that it may be unachievable for all participants in the program.

To minimize the data collection burden, CAEC suggests that funding be made available to Rural Electric Cooperatives to develop a list of all service addresses in their territories. These addresses could then be made available to other telecommunications providers, who would be required to provide information on whether they serve each address and at what speeds. Although NTIA has no mandate to compel participation in this program and is seeking data submissions on a voluntary basis, it supports the consolidated view that would result from the combination of data from participating electric cooperatives and traditional service providers.

8. USTelecom

In its letter, USTelecom states that "mapping data provided at the sub-census block level will require a significant burden on the responding carriers." USTelecom also notes that "the FCC has estimated carriers will spend 355 hours per response, *or more than 44 times* what NTIA's response estimate is." USTelecom also suggests that the total financial burden for the data collection would be considerably higher, using the methodology it proposes. Considering this feedback, it is important to first note that NTIA is proposing a voluntary data collection; should the burden outweigh the potential benefit for any respondent, they are not required to respond. Second, USTelecom's comments would seem to indicate that there is no alignment between this information collection and the work that service providers already do to aggregate their service addresses to Census blocks to respond to FCC Form 477 filings. NTIA believes that there are synergies between the two processes that would result in a lower burden than that associated with FCC Form 477 or either process, alone. However, NTIA does intend to revise its estimate of the burden of the collection of the information in this request, based on input from USTelecom and other commenters.

USTelecom also states that NTIA should "ensure it is in lockstep with the FCC" when enhancing the national broadband availability map. In particular, USTelecom's letter notes that coordination between NTIA and the FCC could reduce the burden on respondents. NTIA appreciates USTelecom's concern about coordination between NTIA and the FCC and notes that the purpose of this voluntary information collection is not to duplicate the FCC's Form 477 process. However, since the FCC has not completed its pending efforts to modernize Form 477, NTIA is pursuing this information collection to gather more granular broadband data in parallel with FCC activities. NTIA acknowledges that future changes in FCC reporting requirements could make this information collection unnecessary or obsolete for broadband service providers. It is also important to note that the scope of this proposed data collection is broader than the FCC-regulated broadband service providers represented by USTelecom that report via Form 477. As specified in the PRA Notice, NTIA is also seeking broadband availability data from private companies, non-profits, cooperatives, educational institutions, tribal governments, and local, regional, or state governments.

USTelecom advocates that NTIA adopt "the broadband mapping methodology that USTelecom recently proposed" to the FCC. USTelecom advises that the first step in this approach is to "create a database of all locations in the United States and then ask carriers to overlay the areas they serve, so that any unserved locations can be identified." While NTIA appreciates the partnership between USTelecom members and the government proposed in USTelecom's comment, it sees three significant issues with the approach. First, NTIA was instructed by Congress to update the national broadband availability map, not develop a nationwide address/location database. Second, the data collection proposed by NTIA – and Congress -- is broader than USTelecom's membership, as NTIA needs to consider third-party data sets "from the FCC, other Federal government agencies, State government, and the private sector." Finally, the approach promoted by USTelecom is unproven – it is presently being trialed by USTelecom members and vendors in Missouri and Virginia.[5] While NTIA is very interested in the results of this trial, it seems unwise for NTIA to simply adopt USTelecom's proposal.

Finally, USTelecom notes that NTIA intends to collect broadband availability data nationwide. While stating that it supports "inclusive state outreach," USTelecom cautions against the concept of "56 separate maps" that could result if NTIA does not deliver a single unified national broadband map. NTIA shares this concern. This mapping program was funded in the FY18 and FY19 budgets it is not a permanent program, and NTIA has made no suggestion that any state or territory should consider disbanding state-level broadband mapping and data collection programs.

9. West Virginia Broadband Enhancement Council

The West Virginia Broadband Enhancement Council (the "Council") supports NTIA's efforts "to undertake broadband data collection that can augment data collected by the Federal Communications Commission ('FCC') through its Form 477 process." The Council notes that "[m]ore nuanced, granular, and accurate data will allow public programs to better identify and target areas that need assistance." Conversely, the Council notes that "[i]ncomplete or misleading data lowers economic opportunity and participation in a digital society by causing missed opportunities to improve broadband service."

The Council notes that the estimated burden for this data collection "may not fully reflect the hours that would potentially be spent by entities other than broadband providers, such as states or local government." The Council goes on to encourage state and community participation in the information collection, noting that "time and data contributed by states and communities should not necessarily be viewed a burden, however, but an opportunity." NTIA is grateful for the Council's comments and hopes that various private companies, non-profits, cooperatives, educational institutions, tribal governments, and local, regional, or state governments will join service providers in voluntarily submitting data.

To minimize the burden of information collection, the Council proposes that "NTIA should publish and promote the use of a common set of standards for different classes of data that respondents can use to report data to NTIA." The Council also notes that the geographic granularity mentioned in the PRA Notice is similar to that used in NTIA's State Broadband

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[5] See US Telecom, Action Center: Broadband Mapping Initiative, https://www.ustelecom.org/broadband_mapping_initiative/.

Initiative (SBI) grant program that mapped broadband availability from 2011 to 2015. The Council goes on to recommend that "NTIA should develop systems with a web interface to receive batch uploads of respondent data (including data from respondents who are not broadband providers)." NTIA notes that it is proposing to accept data in the format it is held by respondents – subject to the removal of PII – in an effort to reduce the burden of responding. However, NTIA will consider a standardized "template" for data submissions, should respondents request it. NTIA intends to leverage an online data collection tool to accept respondent data, and has considered the Council's recommendations of accepting "commonly-used data formats, such as DBF or CSV files for tabular information, shapefiles for map information and JPEG for image information." The online tool will allow respondents to upload many types of files, subject to government information security restrictions.

The Council also suggests that NTIA consider mechanisms to enhance the quality and utility of the information submitted. The Council's detailed four specific recommendations:

> (a) developing additional attributes for data at the Census Block level that will provide a more nuanced understanding of this data, (b) collaborating with states and others to collect speed test data as an additional data set, (c) collecting more granular, sub-Census Block information where available, and (d) incorporating available third-party verification data to improve the accuracy of published results.

NTIA intends to address the first recommendation by allowing users of the national broadband availability map to visually compare and contrast various data sets to better understand broadband availability at the Census block or sub-Census block level. NTIA may also offer various reports to detail this information. Given that the FCC manages the Form 477 data collection and validation, NTIA can make no comment on the accuracy and quality issues identified by the Council in its letter.

Regarding the Council's second point, NTIA concurs that speed testing data can help develop a more complete picture of broadband service delivery. NTIA is considering how to integrate speed test data with the national broadband availability map and will further consider the data standardization suggested by the Council as the program matures.

NTIA fully concurs with the Council's third point that the "greatest benefit of sub-Census Block reporting would be in larger, mostly rural Census blocks," while noting that combinations of broadband availability data and population, socioeconomic, and demographic data are expected to inform broadband policy in urban, exurban, and rural areas, alike. The Council also suggests that NTIA "promote the development of a standard propagation model" for wireless broadband. While NTIA is not developing a standard propagation model at this time, it is observing the FCC's work on the Mobility Fund, as well as industry feedback, as it determines the appropriate course of action to map wireless broadband.

Finally, NTIA agrees with the Council that state efforts are critical to the success of the program. The Council goes on to propose that states "fulfill a verification role" using "unredacted reported data" that state representatives can mark as verified, based on field-testing, location samples, or other mechanisms. NTIA notes that validation is beyond the scope of its legislative authorization

for the national broadband availability map. However, NTIA has considered various policies to support the verification and validation of broadband availability, including state input, field testing, crowdsourcing, algorithms to compare multiple data sets, and other approaches. NTIA will consider the Council's recommendations when evaluating its options.