
Title **0026** 09/29/2022

by **Brent Cunningham** in **Capital Projects Fund (CPF) Broadband Infrastructure Program: Phase Two Applicant Response Form** id. 32479799

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Original Submission 09/29/2022

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I am providing response comments related to the following application (choose one): **CunninghamCommunications_MitchellCounty**

I am responding to the concern that this project: **Other**

Please describe: **In response to the public comment, challenge #0255 regarding AMG/Nextlink’s RDOF/CAF II obligations as stated in their comment and supporting documents, Cunningham Communications submits the following.**

Please provide your response to the public comments received in the text **In response to the public comment, challenge #0255 regarding AMG/Nextlink’s RDOF/CAF II obligations as stated in their comment and supporting documents, Cunningham Communications submits the following.**

box below:

We at Cunningham Communications firmly believe that AMG/NextLink will not be able to meet the requirements as outlined in the CPF guidelines for a wireline connection, despite their RDOF obligations. We do not believe that they will be able to provide minimum speeds of 100/100 that are scalable to 1G/1G and beyond. We also do not believe that AMG/Nextlink's project that overlaps our Mitchell County CPF application will be completed within the 18-months per the guideline. This belief stems from the overall capability of a wireless broadband network and the logistics behind a wireless network's ability to offer 100/100 up to over 1 Gig / 1 Gig – especially within the 18-month timeline.

Our CunninghamCommunications_MitchellCounty application proposes a 100% fiber-to-the-home build which, industry experts agree, has more capability in speed and reliability than wireless internet technologies. Our Capital Project Fund application is for proposed fiber routes as extensions of our existing Cunningham Communications' own investment in Beloit, Kansas. Not only does this proposed build bring fiber Internet to these rural homes and businesses as an extension of our Beloit network in Mitchell County but will improve NCKCN's existing wireless network in the area by feeding it with a fiber backbone to increase their speed capability to the more rural areas (the homes and businesses in the surrounding areas, not included in our FTTH proposed funded service area). As such, Cunningham Communications' Mitchell County application is a better use of federal/state funds than AMG/Nextlink's RDOF obligations because it maximizes existing infrastructure (NCKCN's existing wireless infrastructure in the area) and expands and maximizes our self-funded FTTH network in Beloit to service more rural customers in need of quality and reliable broadband. The very purpose of federal and state funding for broadband is to piggy-back off existing infrastructure where possible to serve the highest number of rural residents and businesses in a way that is the most cost-effective, and that truly maximizes the taxpayer dollars put to this use.

Additionally, funding our Cunningham Communications' Mitchell County CPF application provides additional fiber infrastructure, which actually has the ability to help AMG/Nextlink meet their RDOF coverage obligations in the more rural areas of the county by providing fiber backhaul availability where there is none today.

Fiber optic cable, which carries data using pulses of light through strands of fiber, offers the fastest speeds and the most reliable internet connection than all broadband technologies. A fiber-to-the-home network offers speeds of 1 G / 1 G and beyond.

Fiber is the most scalable of all broadband technologies because it can be unlimited in capacity. As technology evolves, services offered over an existing FTTH network can evolve as well with little or no cost on the physical plant. As technology evolves, if fiber networks need to be updated, it's only the endpoint and central office electronics or

optics that need to be updated to support delivering multi-gig bandwidth to the end user.

Wireless internet technology connects homes and businesses to the Internet using radio signals transmitted by wireless towers. Over-the-air technologies are line-of-sight and elevation and angle to the tower has an extreme limiting effect on bandwidth delivery. Wireless technology can be reliable when fed by a fiber backbone to those homes within a short range of the wireless signal, but as it is passing data over fixed-width channels, its reliability can be highly affected by environmental factors such as distance, trees, and hills. Anything that interrupts the line-of-sight can interfere with or refract the signal. FTTH (particularly buried fiber as Cunningham Communications' Mitchell County CPF application presents), holds up against weather elements such as weather, water, electrical events, and interference, whereas a wireless network can quickly go offline or lose connection quality at the onset of any of these events. Over-the-air-signals also decrease as distance from the nearest tower increases – creating the need for wireless providers to place many, many towers in order to provide a reliable wireless internet service. Even still, it is extremely difficult to offer a 100 Mbps / 100 Mbps broadband connection to homes and businesses, even close to the wireless towers using a wireless connection.

A buried fiber network can withstand the elements, and many, including Cunningham Communication's proposed network are built to withstand the loss of signal due to destruction of fibers, loss of transport, and/or network interface electronics issues. Any issues with the network can usually be localized for quick service-outage response time to reduce any and all service interruptions.

In addition to a fiber-to-the-home network's ability to provide higher speeds and more reliability, fiber networks are not dependent on licensed or unlicensed frequencies. Fixed wireless technology require the use of a public frequency spectrum. This spectrum must be licensed and is subject to limitations for transmissions. If the spectrum remains unlicensed it suffers severe transmission limitations and interference. Fiber optic cable delivers its signal in a way that is not liable to interference and limitations but is self-contained and free of all limitations and interference.

Fiber broadband technology is also more cost-effective than other broadband technologies. When properly installed, a fiber network requires very little maintenance. There are no electrical connections and very few mechanical connections. Wireless internet technology requires more costly maintenance from maintaining/repairing the signal chain from the transmitter/receivers, customer premise receiver antennas, and tower infrastructure. Unlike wireless networks, fiber networks have low maintenance costs, minimal additional expenditures, and are scalable to all future broadband needs.

In addition to these concerns and the evidence supporting them, we also believe that AMG/Nextlink cannot and will not serve our local

communities in the way in which our communities deserve. Our team at Cunningham Communications live and work in these areas, our children attend these schools, we participate in community events together and support each other, our families, and our businesses. As a local business, our customers are our friends and family. Cunningham Communications sponsors local community and school events, we hire locally and have offered education programs and internships for our high school students, we participate in local government, and economic development organization meetings, and we have established, long-term relationships in our communities. We've been serving our local communities for over seventy-five years.

We have included letters in support of Cunningham Communications as evidence of our ties to the community and our ability to serve our residents and businesses with the fastest, most cost-effective internet services possible.

Please provide supporting documents relative to your comments. Please submit multiple files as a ZIP file.

[CunninghamCommunications_MitchellCounty_Application_with_Evidence_-_PROPRIETARY.zip](#)

Brent Cunningham

By submitting this form for public comment and evidence to support your comment, you are accepting responsibility for the accuracy of the information submitted and that it is true and correct to the best of your knowledge. You agree to be contacted by the Kansas Office of Broadband Development, Kansas Department of Commerce should the need arise. Furthermore, by making this submission, you understand that Kansas Department of Commerce and the Office of Broadband Development reserve the right to publicly publish your comment and evidence provided. Falsification of information will result in rejection of future public comment submissions and could result legal action. Please type your name and today's date in the text box below.
