Public Service Commission of Wisconsin
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BROADBAND EXPANSION GRANT APPLICATION
For Fiscal Year 2022

Primary Applicant (Name and Address):	Applications MUST be UPLOADED to ERF via the Commission's website, http://psc.wi.gov/apps35/ERF_upload/content/mymenu.aspx. Refer to section 2.3 for detailed instructions. Applications are due and MUST be uploaded to ERF no later than: **March 17, 2022** at 4:00pm (16:00) Central Time. **Late applications will not be accepted.**
Spectrum Mid-America, LLC and its subsidiary Spectrum Mid-America WI-FY2022, LLC, each managed by Charter Communications, Inc. ("Spectrum" or "Charter") **1320 N Dr. Martin Luther King Jr. Drive** **Milwaukee, WI 53212** **Attn: Celeste Flynn** **414-277-4193** **Celeste.flynn@charter.com**	Contact for further information: PSCStatebroadbandoffice@wisconsin.gov
	Date: **December 1, 2021**

The Public Service Commission of Wisconsin is seeking applications for Broadband Expansion Grants. The Commission may award one or more grants during Fiscal Year 2022 to public and private entities that meet the eligibility requirements set forth in Wis. Stat. § 196.504. This grant round will be funded with bond proceeds authorized by the Wisconsin Building Commission pursuant to Wis. Stat. § 13.48(30). As such, successful applicants are subject to the requirements of Wis. Stat. § 13.48(30). Successful applicants will demonstrate a clear and achievable plan to improve broadband communications services in one or more underserved areas in the State.

Applicant Certification: In signing this application, the undersigned verifies under penalty of perjury that the Applicant and its employees and agents have not, either directly or indirectly, entered into any agreement or participated in any collusion or otherwise taken any action in restraint of free competition with respect to this application; that no attempt has been made to induce any other person or firm to submit or not to submit an application; that this application has been independently arrived at without collusion with any other proposer, competitor or potential competitor; that this application has not been knowingly disclosed prior to the opening of applications to any other applicant or competitor; that all of the responses and representations of Applicant in this application are true and correct to the best of the undersigned's knowledge, information, and belief; and that Applicant agrees to, accepts, and will comply with all of the terms and conditions respecting this application and any award of a broadband expansion grant as may be established in a grant award Agreement.

Name of Authorized Representative (Type or Print)	Title:	Phone: **(608) 467-9202**
Joseph J. Sherer II	**Vice President, Regional Engineering of Charter Communications, Inc., the Manager of the Applicants**	
Signature of Authorized Representative Joseph J. Sherer II	Date 3/17/2022	

SUMMARY OF GRANT APPLICATION

Primary Applicant Name **Spectrum Mid-America, LLC and its subsidiary Spectrum Mid-America WI-FY2022, LLC, each managed by Charter Communications, Inc.** ("Spectrum" or "Charter")	Amount of Broadband Grant Request (round to nearest dollar) **$2,600,604**
Federal Employer Identification No. **Spectrum Mid-America, LLC: 43-1857213** **Spectrum Mid-America WI-FY2022, LLC: 88-1251860**	Amount of Matching Funds Pledged (round to nearest dollar) **$1,137,000 Charter** **$330,000 Waupaca County** **Total:$1,467,000**
Contact Name and Title **Celeste Flynn, Director, Govt. Affairs**	Total Cost of Proposed Project (round to nearest dollar) **$4,067,604**
Telephone Number **(414)277-4193**	Project Name **BB App Spectrum, Waupaca County**
E-mail Address(es) **celeste.flynn@charter.com**	Type of Proposed Broadband Service (FTTH, Cable, DSL, etc.) **FTTP EPON**
Grant Manager, if different than Primary Applicant **N/A**	Type of Proposed Project (Last-mile, Middle-Mile, backbone, other) **Last-Mile**
Grant Manager Contact Name	Grant Manager Email Address and Telephone Number
If the application proposes a public-private partnership, list the names, addresses, and FEINs of the partner companies or organizations **Public Partner Name: Waupaca County** **Attn: Ryan Brown, Planning and Zoning Director** **Address: 811 Harding Street, Waupaca, WI 54981** **FEIN Number: 39-6005758**	
Brief Project Description (2 sentences) **Charter requests a grant to support the construction of a new last-mile fiber-to-the-premises ("FTTP") via Ethernet passive optical network ("FTTP EPON" or "EPON") to provide high-speed broadband access to approximately 379 unserved and underserved locations in Waupaca County. Charter does not request any funding to support its existing network infrastructure.**	
Maximum Proposed Download Transmission Speed **1000 Mbps (Scalable to higher Gig speeds in the future)**	Maximum Proposed Upload Transmission Speed **500 Mbps (Scalable to 1000 Mbps / 1 Gig or higher in the future)**

Minimum Proposed Download Speed to Customer Location **200 Mbps (30 Mbps – Spectrum's low income offering)**	Minimum Proposed Upload Transmission Speed to Customer Location **10 Mbps (4 Mbps – Spectrum's low income offering)**
County or Counties served by this project **Waupaca**	Community or Communities served by this project **Towns of Wyoming, Harrison, Dupont, and Helvetia and the Village of Big Falls**
List of the broadband service providers, if any, currently serving the area the applicant proposes to serve **Frontier Communications** **TDS** **Wood County Telephone Company**	
Does proposed project serve an *unserved* area of the State, as defined in Section 1.4 of the application instruction? (yes/no) **Yes**	Is the Applicant certified as a Broadband Forward! Community or Telecommuter Forward! Community, or does the grant project propose to serve a Broadband Forward! Community or Telecommuter Forward! Community? (yes/no) **No**
For last mile projects or component the expected number of Business Locations that will have access to the improved broadband service (i.e., total business locations passed or with new service access). **4**	For last mile projects or components the expected number of Residential Locations that will have access to the improved broadband service (i.e., total residential locations passed or with new service access). **375**
Of the improved business locations, how many locations are *unserved*? **N/A**	Of the improved residential locations, how many are *unserved*? **N/A**
For providers that are eligible telecommunications carriers will the proposed broadband service be available to Lifeline customers? (yes/no) **N/A**	Are there any programs available for low-income households to access low-cost service or discounts? (yes/no) **Yes**
Is the internet service provider currently participating in the Emergency Broadband Benefit Program? (yes/no) **Yes and through its successor program the Affordable Connectivity Program (ACP)**	Is the internet service provider currently participating in the Department of Public Instruction and CESA purchasing's Digital Learning Bridge? (yes/no) **Yes**
Did the internet service provider participate in the Public Service Commission's voluntary Broadband Coverage Data Collection in 2021? (yes/no) **Yes**	

FY22 Broadband Expansion Grant Application
Budget & Income Summary

Wisconsin Broadband Office

Please complete this form using Microsoft Excel. A PDF copy must be attached to your application as page four. In addition, this form must also be uploaded to ERF in Excel format.

Grant Summary

Grant Applicant:	Project:
Spectrum Mid-America, LLC and its subsidiary Spectrum Mid-America WI-FY2022, LLC, each managed by Charter Communications, Inc.	BB App Spectrum, Waupaca County

Budget

Line:	Description / Category:	Grant Funds:	Match:	Total:
1	Contractual, Consultant Fees	$ 1,925,800.00	$ 1,086,343.00	$ 3,012,143.00
2	Equipment	$ 674,804.00	$ 380,657.00	$ 1,055,461.00
3	Supplies			$ -
4	Labor (Salary, Fringe)			$ -
5	Permitting, Licensing Fees			$ -
6	Travel			$ -
7	Other			$ -
	Total:	$ 2,600,604.00	$ 1,467,000.00	$ 4,067,604.00
		36.1% match requested		

Pledged Contributions

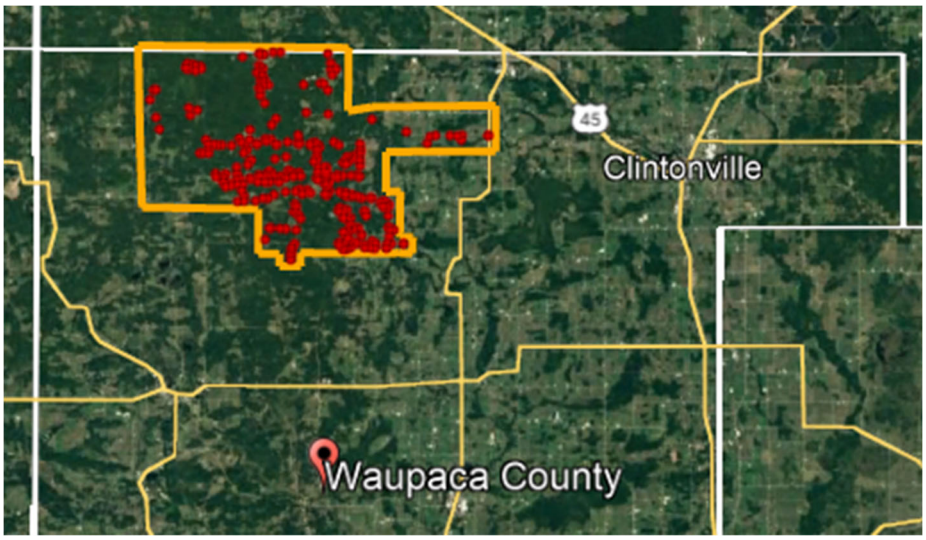
#:	Entity:	Entity Type:	Pledge Type:	Pledge:
1	Spectrum Mid-America, LLC and its subsidiary Spectrum Mid-America WI-FY2022, LLC, each managed by Charter Communications, Inc.	Applicant	Cash	$ 1,137,000.00
2	Waupaca County	Partner	Cash	$ 330,000.00
3				
4				
5				
6				
7				
8				
9				
10				
			Total:	$ 1,467,000.00

These costs do not include certain direct and indirect costs, reflecting contributions to the Project by Charter personnel that Charter is proposing to absorb itself, and for which this application does not seek grant funding. Project costs are limited to direct expenses for materials and contractor labor, only allowable expenses are included. All network builds and expansion will be fully owned by Charter. Funds requested in this Application will be used solely for the purpose of constructing and installing new broadband infrastructure throughout the designated grant area. While the Project will utilize and leverage existing facilities and assets to deliver broadband service to the Project area, Charter is not seeking funding for any portion of its existing asset base. No grant funds will be used for subsidizing operating costs.

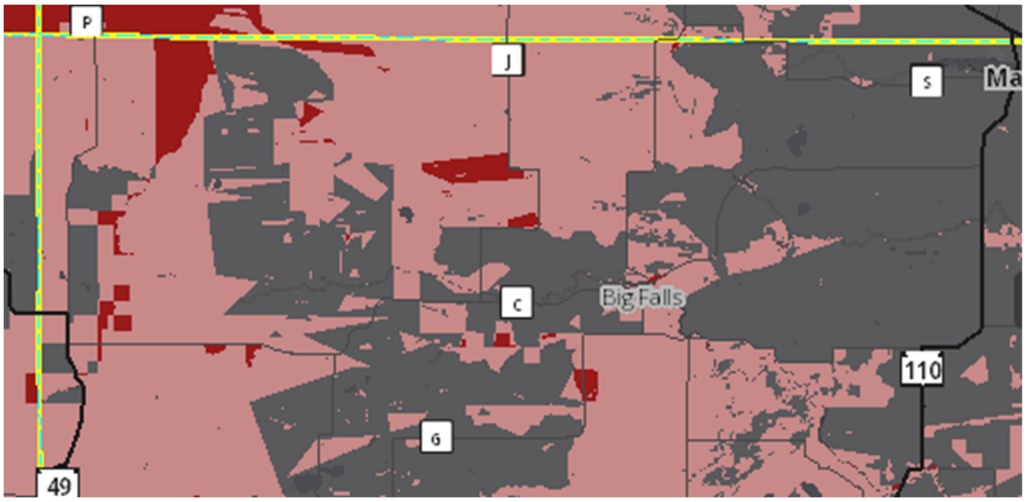
Description of the Project Area to Be Served

The proposed Project Area is within the municipal boundaries of the towns of Wyoming, Harrison, Dupont, and Helvetia and the Village of Big Falls in Waupaca County. The Project includes building nearly 100 miles of fiber optic network to connect an estimated 379 underserved homes, businesses and community anchor institutions. A map of the proposed Project Area is shown below, along with the associated eligibility map.

Project Area:



State Eligibility Map:



I. Executive Summary of the Project

Waupaca County, in collaboration with Charter, is requesting a grant to construct a last-mile fiber-to-the-premises ("FTTP") via Ethernet passive optical network ("FTTP EPON" or "EPON") to provide service to unserved and underserved households in Waupaca County (the "Project"). The proposed Project Area is within the municipal boundaries of the towns of Wyoming, Harrison, Dupont, and Helvetia and the Village of Big Falls in Waupaca County. **The Project includes building nearly 100 miles of fiber optic network to connect an estimated 379 underserved homes, businesses and community anchor institutions**.

The Project will use Charter's FTTP EPON architecture, a standardized and mature model that is operated by Charter across the country, engineered and managed to meet 1 Gbps downstream speeds, 500 Mbps upstream speeds (and engineered to be scalable to higher speeds in the future), and latency of well below 100 milliseconds. Charter's FTTP EPON deployment is relevant and suitable for remote learning and remote working, offering very high bandwidth and low latency service attributes that accommodate numerous members of a household or small business simultaneously using bandwidth-intensive applications, such as video conferencing, telemedicine, video streaming, gaming, virtual or augmented reality sessions, and numerous other applications. New customers in the Project Area will have access to several Internet speed options, including Charter's "Spectrum Internet" with a standard starting speed of up to 200/10 Mbps and Charter's "Internet Gig" service at up to 1000/500 Mbps. Additional services that will be available to Charter Internet customers include, but are not limited to, anti-virus security protection and in-home WiFi. As an added benefit of its FTTP network, Charter will also be in a position to offer competitive video, mobile and voice services in the grant area.

Because Charter has a well-established process for initiating and overseeing new construction projects, existing relationships with contractors to perform design, make-ready and construction work, and holds numerous regulatory authorizations and pole attachment agreements that can facilitate prompt access to rights-of-way and utility poles, it anticipates that it would be able to start work on the Project promptly upon approval. If awarded grant funds, Charter anticipates beginning the project promptly with completion within the project period of up to 24 months, subject to timing of grant awards. Any delay in meeting that time frame related to pole attachment make-ready work required to install facilities, permitting, ability to access relevant locations, or other issues outside Spectrum's reasonable control, including pandemic-related or raw materials shortages, would promptly be brought to the attention of the PSC in order to secure additional time to complete the Project.

II. Priority Factors

a. Matching Funds

Charter estimates the direct cost of this network construction at $4,067,604, and requests a $2,600,604 (64%) grant to complete the Project. Charter and Waupaca County would contribute the remaining cost to complete the Project—a contribution of $1,137,000 from Charter; and $330,000 from Waupaca County, a combined $1,467,000, or 36% of the Project's up-front, direct construction costs. In addition, Charter will absorb all indirect costs and all operational costs of the Project going forward.

Charter's commitment to contribute or absorb substantial costs associated with the Project, and seek grant funding for only a portion of the direct construction costs for the new network facilities, results in a budget that will leverage Charter's existing resources, maximize the impact of grant funds, and streamline grant administration due to the limited nature of the expenditures for which Charter is seeking reimbursement.

Charter will be able to leverage its substantial existing internal resources and expertise to provide its management and supervision of the Project, and is not seeking reimbursement of its costs associated with project administration or any design, coordination, and other tasks that will be carried out by Charter internal employees within its construction, engineering, and field operations organizations. In addition to increasing the cost-effectiveness of state funds, Charter's commitment to limit the expenses included in the budget will simplify administration of the grant and verification that grant funds are expended only for allowable costs.

As set forth in the accompanying budget spreadsheet and justification, the Project includes within its proposed budget only a limited set of Charter's estimated direct, verifiable costs of construction. These consist of estimated material costs; direct contractor labor to carry out design, make-ready, and construction work; and licensing/permitting expenses. Indirect costs and certain other direct costs associated with the effort—such as the contributions by Charter's internal employees on project design, supervision, and management—will be absorbed by Charter as part of its regular operations.

The network will also be backed and operated by Charter, the nation's second-largest broadband provider with extensive experience owning, operating, maintaining, and upgrading broadband networks, as well as well-recognized financial stability. Charter's financial resources and recognized, investment-backed commitment to rural America provide reassurance that Charter will be able to carry out the terms of the grant and continue to operate the system going forward. While these resources and assets are essential for the Project's success, Charter is not requesting any grant funding or support for its existing assets or facilities.

b. Public-private partnership

Proposed Joint Project Between Waupaca County and Charter

The Project will be a joint effort between Waupaca County and Charter, with Charter acting as the primary applicant and assuming responsibility for the construction and operation of the proposed network.

Waupaca County is actively engaged with the Project, and will:

- Support the project through collaborative oversight, community engagement, facilitating installation operations, and direct marketing activities.
- Consult with Charter to verify build-to-location data in the proposal, including final verification of Project locations.
- Support Removal of Regulatory Barriers. Charter, as described below, is well versed in managing the regulatory processes associated with the deployment of its broadband network. Nonetheless, sometimes obstacles arise that are beyond Charter's control, such as local permitting issues, pole attachments, and access to rights-of-way and easements. To the extent it is within its scope of authority, Waupaca County will work with Charter to coordinate removal of these obstacles.

Charter, described in more detail below, is an experienced service provider and a leading broadband company, and is well-versed and experienced in abiding by all necessary federal, state, and local requirements that are impacted during the build out and expansion of its network. Charter's role in the Covered Partnership will consist of:

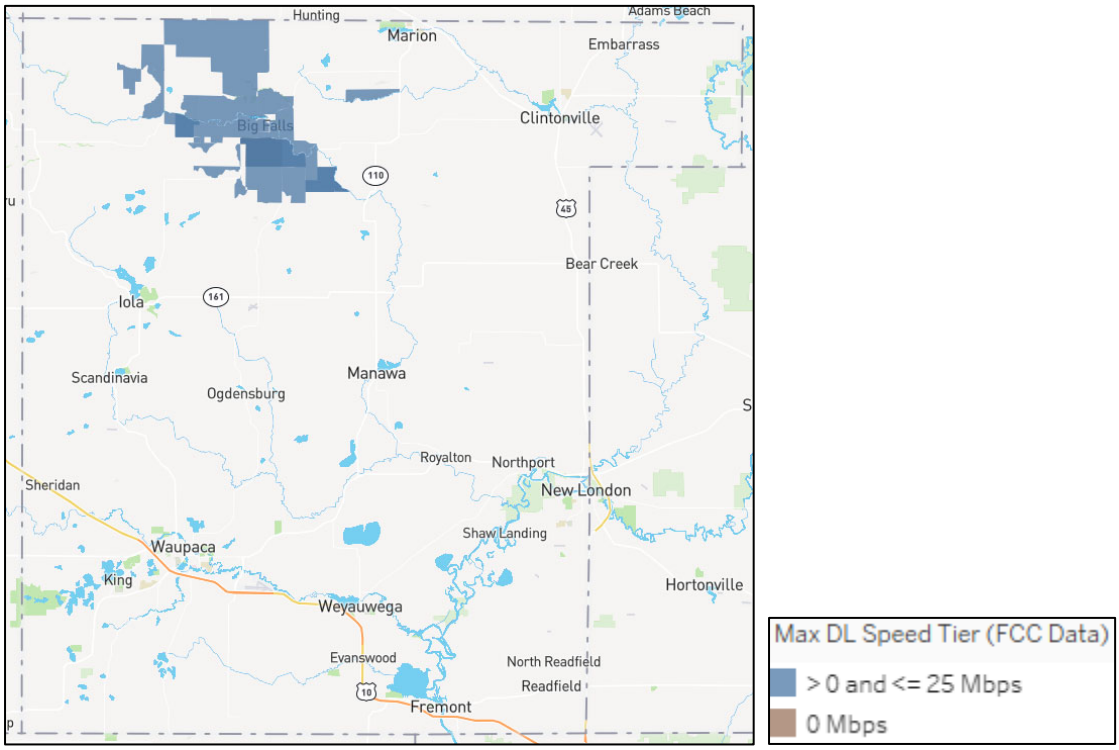
- **Construction Management**: If the Project is selected for a grant, Charter will work with Waupaca County to verify Project data regarding unserved and underserved households and businesses, secure the necessary permits, pole attachments, and other authority as necessary to support the Projects. In addition, Charter will complete the construction plan (including timeframes and costs) and manage all other aspects of the construction effort, maintenance of the system, and customer intake and service delivery. All networks builds and expansion will be fully owned by Charter or a Charter affiliate.
- **Commitment of Funds and Personnel**: If the Project is selected for a grant, Charter will contribute substantial private financial and operational resources to ensure the success of the Project, consisting of:
    1. A direct cash contribution to the direct design, construction, and licensing and permitting costs for the Project (a commitment estimated at $1,137,000, or 28% of the estimated direct construction costs of the Project);
    2. A contribution of all indirect costs of the Project, which Charter will absorb itself; and
    3. By absorbing all other direct costs of the Project not captured in the direct design, construction, and licensing/permitting costs, including supervision and management of the effort by Charter personnel.
- **Collaborating on Community Engagement**: Working with communities Waupaca County to assist with digital literacy and broadband adoption strategies.

Letters of Commitment for each member of the partnership, setting forth their respective roles, are attached to this application as **Exhibit A**.

c. Existing broadband service

According to the PSC's eligibility map, the entire proposed Project Area is eligible for the grant program. The Project will have a substantial impact in the Project Area by connecting an estimated 379 households, businesses and anchor institutions, to last-mile connections providing 100% of those locations with access to a first-in-class, Gigabit network offering speeds of up to 1000Mbps/500Mbps with very low latency, transforming the broadband offerings available in the community.

Current Competitor Speeds in Project Area



Wireline Carrier*	FCC Tier	Tech Type	Max Down Speed	Max Up Speed	Census Block Count	% of Project Census Blocks**
Frontier Communications Corporation	<= 25 Mbps	DSL	12	1	74	78.7%
Telephone and Data Systems, Inc.	<= 25 Mbps	DSL	25	5	10	10.6%
Wood County Telephone Company	<= 25 Mbps	DSL	10	1	9	9.6%

*Competitors who do not specify speeds are not included in list.

**Does not total 100% as multiple competitors can overlap and some census blocks may be unserved

Source: FCC Broadband 477 database Dec 2020; Map: Tableau using project area census blocks

d. Project impact

Service Offerings and Price

Upon completion, residents in the proposed Project Area will have access to Charter's Spectrum Internet Gig service (up to 1000/500 Mbps). With Spectrum Internet, customers can simultaneously stream videos, download music and more without sacrificing performance. Spectrum provides free modems and the fastest, most powerful in-home WiFi to do more on more devices.

Charter employs a nationwide pricing structure (called Spectrum Pricing & Packaging), which offers standardized pricing for each tier of broadband internet service Charter offers new customers across its service territory. Charter's pricing strategy ensures that rural customers receive the same pricing as other highly competitive areas in the state. Charter's wireline broadband offerings currently include no data caps, usage-based pricing, early termination or modem fees.

Current prices for Charter's Spectrum Internet Assist, Spectrum Internet, and Spectrum Internet Ultra service tiers, and its planned pricing for the Spectrum Internet Gig service tier, are as follows:[1]

Table 1: Standard Charter Wireline Residential Broadband Service Offerings and Prices

Speed Tier[2]	Downstream Mbps	Upstream Mbps	Standard Monthly Rate – without Promotional Pricing[3]	Installation Fee
Spectrum Internet Assist[4]	30	4	$17.99	$0.00[5]
Spectrum Internet	200	10	$74.99	$49.99
Spectrum Internet Ultra	400	20	$94.99	$49.99
Spectrum Internet Gig	1000	500	$114.99	$49.99

In addition to the standard, non-promotional rates itemized above, Charter may also offer promotional pricing, including bundled discounts. Charter's current promotional offerings can be found at https://www.spectrum.com/internet.[6] Spectrum's terms of service will apply to all tiers of service. In addition to wireline broadband services, Charter will also offer video, voice, and mobile services in the grant area.

Low Income Programs

Spectrum has engaged in several initiatives and established numerous business practices that benefit consumers in need and demonstrate our commitment to the community. As described below, Spectrum has established several programs to provide low cost internet service particularly for students and remote learning, has assisted customers struggling to pay their bills for service, and supported communities by providing good paying jobs and long-term careers, and strengthening local organizations. Charter's current programs are described below. Just recently Charter announced an enhanced affordability solution called "Internet 100" for $29.99, which is tied to the federal government's new Affordable Connectivity Program (ACP). Customers qualifying for ACP in Wisconsin will be eligible to receive a new low-cost, low-income product offering of up to 100Mbps download and 10Mbps upload for less than the monthly $30 ACP subsidy. This service will remain available for the duration of the ACP.[7] For the duration of the ACP, Charter also currently plans to continue offering Spectrum Internet Assist to customers who meet the eligibility and prefer to purchase that service.

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[1] All rates, speeds and terms of service stated herein are subject to change.

[2] Represented pricing is for wireline residential broadband service only. In addition to wireline broadband services, Charter will also offer video, voice, and mobile services in the grant area.

[3] Customers can add WiFi for $5.00 per month (Spectrum Internet Assist, Spectrum Internet & Spectrum Internet Ultra).

[4] Spectrum's Internet Assist program provides 30 Mbps broadband to qualified families with children on the National School Lunch Program or seniors receiving supplemental income.

[5] For self-installation only. Additional fees may apply for professional installation.

[6] All promotional offers are subject to change and may not be available in all areas or to all customers.

[7] The discount is up to $75 per month in Tribal Lands. The ACP is limited to one monthly service credit per household. Other program qualifications and restrictions may be found at www.spectrum.net/support/internet/affordable-connectivity-program. Terms and conditions of product service and offering may be subject to change.

- **Stay Connected K-12 Program:** To help address the lack of Internet connectivity faced by some student households, through the Stay Connected K-12 program, Spectrum is working directly with schools and school districts across its footprint to assist them in offering high-speed, cable broadband Internet access to students, educators, and staff in their homes. Spectrum is currently connecting thousands of students and educators through this program across the Country. This product offering helps to ensure that learning, teaching, and working are uninterrupted by giving schools and school districts the flexibility to add students to the program when needed, and provide much-needed in-home connectivity at speeds up to 50 Mbps/5 Mbps. To date, Spectrum has established such relationships with school districts in Wisconsin and 18 other states, including Alabama, California, Colorado, Connecticut, Florida, Georgia, Idaho, Indiana, Kentucky, Maine, Massachusetts, Minnesota, Missouri, New York, Ohio, Oregon, Texas, and Washington.
- **Bulk Rate Solution to Bridge Digital Divide:** Charter now also offers a bulk rate partnership opportunity for counties, municipalities, housing authorities, or other local entities to identify homes in underserved areas and provide them with a heavily discounted bulk rate for Spectrum's Internet service offering. If the County is interested in exploring a bulk rate discount program, Spectrum is happy to further discuss this at the appropriate time.

e. Scalability

Charter's participation in the Federal Communications Commission's Rural Digital Opportunity Fund (RDOF) rural broadband expansion program will allow significant synergies with Charter's existing infrastructure and scalability in connection with this proposed Project. Charter's RDOF will add 3333[8] additional locations in Waupaca County beyond what the proposed Project would provide.

Charter's network design offers scalability that non-wireline offerings cannot match. The FTTP EPON architecture proposed for the Project will scale to support customer growth and data usage growth for (a) ever increasing application requirements; (b) increasing quality demand; and (c) lower response/latency demands for ever increasing usage of highly interactive applications.

FTTP EPON technologies leverage fiber optic cables that provide vast amounts of bandwidth over a very low loss transmission medium. Fiber backbones operated by the largest communications companies in the world, such as Charter, rely on fiber optic cables to carry Terabits per second of traffic in a single fiber strand. This same technology concept is applied in the last mile FTTP architecture, providing growth support for decades to come. Scalable elements also include routers and switches that support higher speeds and services.

As Charter adds customers over time and as customers consume more bandwidth, Charter's scalable model and proven capacity management processes will accommodate this growth. While Charter will be building a new last mile FTTP EPON network in the Project Area, this last mile network will be connected to Charter's existing robust and scalable network tiers, which are already in place and ready for growth. Charter augments its capacity through normal operating procedures, and these procedures will extend to the proposed Project Area seamlessly.

In addition, recognizing the importance of fast, reliable service for community institutions, **Charter also offers up to 100 Gbps symmetrical speeds to large businesses, schools, libraries, hospitals, and other important community institutions through customized dedicated builds by its Spectrum Enterprise**

[8] Estimated number of locations provided by the FCC at the time of award. Actual number of locations subject to future walkout, design, engineering and other verification.

business organization. The present application and proposed budget do not include the costs of such customized builds; however, Charter's network presence in the project area would better position the company to make such offers available.

f. Economic development

Our partner Waupaca County offers the following input: This particular area of the County is especially not covered with broadband options. There is very little to no options of true broadband internet available. With this being the case, having fiber ran to the homes in this area will create opportunities that do not exist right now. The option of telecommuting, running a business or just having students being able to learn virtually, with the speeds that will be available with this project, will represent a complete sea change to the current situation. The possibilities that will exist after this project is very exciting. Given the current situation, the area is stunted in its growth. It is well known that if you wish to reside in this general area, broadband internet is just not option therefore people and businesses decide to go elsewhere.

Economic impact the project could have for an individual business located in the project area.

We live in a global economy and living and working through the pandemic has demonstrated first-hand the need for a quality, reliable broadband connection for businesses large and small.
The availability of high speed broadband is a necessity to retain the existing workforce and a key consideration of companies looking to establish or relocate facilities.

How an improved download and upload transmission speed could better support a specific business in the project area.

As Wisconsin's workforce adapted to remote work, those without a reliable broadband connection struggled to stay connected. Improved download and upload speed benefit any employee working remotely.

How improved broadband service could impact residential property values, supported by local sales data if available.

The availability of high-speed internet is often a contributing factor in a buyer's decision making when searching for a home. The National Realtors Association has estimated the lack of broadband could reduce the value of a home up to five percent. As buyers migrate from an urban to a rural setting, homes without access to reliable broadband are at a considerable disadvantage.

How improved broadband service to a residential portion of the project could benefit a telecommuting population.

The pandemic has forced employers and employees to evaluate how they work. In many cases, remote work is not only allowed, but encouraged. A robust, reliable broadband network is essential as the workplace evolves from commuting to the home office rather than the urban office. The investment from this grant will enhance the remote work experience.

How the speeds and service being offered by the project fits with current and future economic needs of the community and local businesses.

FTTP technology in rural communities will bring benefits that are scalable to meet future needs. Businesses benefit by having the fastest speeds available and residents benefit from technology they can utilize for remote work, remote learning, telehealth and connecting with the world.

How the proposed project will affect the ability of individuals to access health care service from home, including any impact upon the costs of those services.

A recent study published in January 2021 by the University Extension-Madison entitled, *Broadband and the Wisconsin Economy*, analyzes data collected by the University of Wisconsin-Madison Population Health Institute and reported in the County Health Rankings. The study found that the "*data supported the notion that a lack of access to the internet and broadband could be associated with higher levels of fair to poor health and a higher number of poor mental health days as counties that have more limited access to the internet and broadband tend to have poorer health outcomes*"[9].

Charter's proposed FTTP network is well suited for bandwidth-intensive applications like telemedicine. Charter's FTTP network would enable customers to engage in virtual doctor visits without leaving their homes. Accordingly, telehealth is a promising approach to reduce health disparities in rural communities by bringing specialized healthcare to these communities where such care was previously unavailable. Telehealth also facilitates monitoring and follow-up care for chronic health conditions, and connecting providers in remote areas, mental health services, and access to online pharmacies. Local public health departments can also leverage telehealth approaches to better serve their communities.

How the proposed project will affect the ability of students to access educational opportunities from home

The rural digital divide in education has never been more amplified than it was during the pandemic. "*Rural Voices for Prosperity: A Report of the Governor's Blue Ribbon Commission on Rural Prosperity*" succinctly captured the challenges faced by rural students lacking adequate broadband by stating, "*Students that lack broadband access experience competitive disadvantages and large barriers to preparing for the 21st century workplace*[10]".

If awarded, this project will help close the rural digital divide and open a whole new learning experience for students eager to learn.

g. Effect upon broadband service to adjacent areas

This proposed project will not impair the ability of a broadband service provider or competing broadband service provider to extend broadband service to areas adjacent to the proposed Project Area.

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[9] https://economicdevelopment.extension.wisc.edu/files/2021/06/2021-01-07-Broadband-Report.pdf

[10] https://ruralwi.com/wp-content/uploads/2021/10/Governors-Blue-Ribbon-Commission-Report.pdf

III. Additional information supporting the application

a. Charter's History and Experience

Across the nation and in Wisconsin, Charter is a leading connectivity company providing superior products and services through its Spectrum brand of services and investing in the infrastructure, technology, and people powering the future. Charter is at the intersection of technology and entertainment, facilitating communications that connect more than 32 million residential and business customers in 41 states. Charter's commitment to serving customers and exceeding their expectations is the bedrock of Spectrum's business strategy and is the philosophy that guides its 93,000+ employees (that includes the approximately 3,600 employees who call Wisconsin home).

Nationally, Charter is the second largest broadband provider. The company has achieved growth through innovation and acquisitions of cable properties, including completing transactions with Time Warner Cable and Bright House Networks. U.S. News and World Report recently named Spectrum Internet as the "**Best Internet Service Provider for Rural Areas.**"[11] Charter's commitment to service quality has resulted in Multichannel News naming its Spectrum brand as **Operator of the Year for 2020,** CableFax naming us **"2021 MSO of the Year,"**[12] and CNET naming Spectrum the **"Best Cable Internet Provider"** for 2022.[13] Spectrum's unparalleled commitment to service quality was especially evident in response to the pandemic. Charter's network continued to perform well despite higher levels of peak bandwidth usage. And Charter accomplished all this while making adjustments to how and where we worked in response to COVID protocols.

Charter has invested nearly $40 billion in infrastructure and technology over the last five years as part of its long-term commitment to expanding broadband access across urban, suburban and rural areas to connect more Americans. From 2018-2020 alone, Charter extended its network to reach an additional 2.5 million new homes and businesses, about a third in rural areas. Charter has recently announced a $5 billion dollar initiative through RDOF to connect more than a million currently-unserved, mostly rural families and small businesses to reliable broadband service with speeds of up to 1 gigabit per second, including adding significant resources to its construction department focused solely on adding nearly 115,000 miles of new network infrastructure to its more than 750,000 existing miles. Charter also plans to hire more than 2,000 employees and contractors to support the expansion nationwide. Wisconsin is the state where Charter received its largest RDOF award.

Charter will use the same network deployment and operational procedures in the Project Area that are currently successfully employed across the country. These practices include documented and thoroughly tested methods of managing network performance, managing service issues at a network or customer level, and coordinating change management with minimal or no disruption to customers. All of Charter's services are delivered over its state-of-the-art network and Charter backs them up with professional customer service and support from local technicians. Charter is dedicated to bringing its clients innovative, reliable services, and responsible care.

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[11] U.S. News and World Report, *Best Internet Providers for Rural Areas* (July 8, 2021), https://www.usnews.com/360-reviews/internet-providers/best-rural

[12] https://www.cablefax.com/event/2021-cablefax-top-ops

[13] https://www.cnet.com/home/internet/best-cable-internet/

In Wisconsin, Charter (and its predecessor companies) have been providing broadband internet service for decades. Charter currently serves over 800 communities in Wisconsin, and provides broadband internet, video and voice service to more than 1.5 million customers, operating more than 40,000 miles of plant. In 2021 Charter began its commitment to build more than 140,000 new, unserved locations in Wisconsin through RDOF. More than $668 million will be invested in Wisconsin, which includes an expected private investment of approximately $500 million by Charter and $168 million in support won by Charter in the FCC's RDOF auction. For this Project, Charter will be able to draw on the experience and capabilities of its regional and local personnel building and maintaining broadband infrastructure in all of these efforts.

As stated above, Charter has extensive experience building new network across 41 states every year, including deployment of its network into unserved rural areas, is well informed and practiced in adhering to required permitting processes and laws, and has well-established procedures to ensure that its networks are always constructed consistent with all applicable legal and regulatory requirements.

Charter's construction project management system, called PRISM, contains an exhaustive guided workflow to manage all aspects of the construction process, including all necessary federal, state, and/or local governmental permits and approvals. The PRISM permit module enforces strict adherence to permitting rules, ensuring that steps in construction do not proceed without verified and approved permit documentation present in the system. Training is conducted frequently by a dedicated training group in Charter's Field Engineering support organization to ensure Charter's Construction Coordinators are well versed on the business processes and systemic solutions that projects are managed effectively and efficiently.

Prior broadband expansion projects

Charter recognizes the importance of extending broadband service to unserved and underserved rural Wisconsin. Since 2014, Charter has actively participated in the Wisconsin Public Service Commission State Broadband Grant Program and has received 17 broadband grant awards. Twelve of these grant projects have been completed and of the remaining five, one is expected to be completed in the spring of 2022 and the remaining four are expected to be completed by December 31, 2024. Through these public-private projects, thousands of previously unserved and underserved residents now have access to broadband.

The below chart provides a list of our successful public/private broadband expansion efforts in Wisconsin since 2018.

COMPLETED PROJECTS

Area	County	Community	Residential and Business Locations added	Activation date	Technology Used	Grant or Full Spectrum Investment
Pardeeville	Columbia	Village of Pardeeville	1045	Jun 2018	Hybrid Fiber Coax	Full Spectrum Investment
Dunn	Dane	Town of Dunn	117	Jun 2018	Hybrid Fiber Coax	State BB Grant
Fall River	Columbia	Village of Fall River	780	Mar 2019	Hybrid Fiber Coax	Full Spectrum Investment
King	Lincoln	Town of King	323	Jan 2020	Hybrid Fiber Coax	State BB Grant

Monticello	Green	Village of Monticello	567	Feb 2020	Hybrid Fiber Coax	Full Spectrum Investment
Orfordville & Footville	Rock	Villages of Orfordville & Footville	843	July 2020	Hybrid Fiber Coax	Full Spectrum Investment
Menominee	Menominee	Menominee Tribe	210	Dec 2020	FTTP	CARES Act Grant
Walter Dr - Woodruff	Oneida	Town of Woodruff	68	Dec 2020	Hybrid Fiber Coax	State BB Grant
Anson	Chippewa	Town of Anson	57	Dec 2020	Hybrid Fiber Coax	State BB Grant
Aedan Egan-Belgium	Ozaukee	Village of Belgium	19	Feb 2021	Hybrid Fiber Coax	State BB Grant
Strawberry Glen – Jackson	Washington	Town of Jackson	46	Feb 2021	Hybrid Fiber Coax	State BB Grant
Fairwater – Ripon	Fond du Lac	Town of Ripon	185	May 2021	Hybrid Fiber Coax	State BB Grant
Lake Michigan Dr – Sturgeon Bay	Door	Sturgeon Bay	134	Jun 2021	FTTP	State BB Grant
Marquette	Green Lake	Village of Marquette	164	Aug 2021	Hybrid Fiber Coax	State BB Grant
Randolph	Columbia	Village of Randolph	837	Oct 2021	Hybrid Fiber Coax	State BB Grant
Lyons	Walworth	Town of Lyons	53	Nov 2021	Hybrid Fiber Coax	State BB Grant
Menominee Phase 2	Menominee	Menominee Tribe	26	Dec 2021	FTTP	CARES Act Grant

PROJECTS IN PROGRESS

Area	**County**	**Community**	**Residential and Business Locations added**	**Deadline to complete**	**Technology Used**	**Grant or Full Spectrum Investment**
Eagle River – Silver Lake, Rangeline & Deerskin	Vilas	Towns of Washington & Lincoln	705	Summer 2022	FTTP	State BB Grant
Racine	Racine County	Countywide	2000	December 31, 2024	FTTP	State BB Grant
Kenosha	Kenosha County	Countywide	918	December 31, 2024	FTTP	State BB Grant
Walworth	Walworth County	Countywide	1648	December 31, 2024	FTTP	State BB Grant
Town of Janesville	Rock	Town of Janesville	39	December 31, 2024	FTTP	State BB Grant

b. A description of how the proposed project will or will not duplicate existing broadband infrastructure.

Charter will not build to any existing locations already served by Charter. Moreover, all of the locations proposed for the Project are either "unserved" or "underserved" as defined in Wis. Stat. § 196.504, so the Project does not duplicate any other provider's existing infrastructure in any "served" area.

c. A description of an applicant's financial ability to undertake the proposed broadband construction project.

Charter's proposed Project budget includes only a limited set of Charter's estimated direct, verifiable costs of construction. These consist of estimated material costs; direct contractor labor to carry out design, make-ready, and construction work; and licensing/permitting expenses. Indirect costs and certain other direct costs associated with the effort—such as the contributions by Charter's internal employees on project design, supervision, and management—will be absorbed by Charter as part of its regular operations.

Once constructed, the State can also have a high degree of comfort that the Project will be sustainable. The network will also be backed and operated by Charter, the nation's second-largest broadband provider with extensive experience owning, operating, maintaining, and upgrading broadband networks, as well as well-recognized financial stability. Charter has substantial cash flow, revolver capacity, and access to the capital markets. Charter's financial resources and recognized, investment-backed commitment to rural America provide reassurance that Charter will be able to carry out the terms of any grant and continue to operate the system going forward.

Charter Communications, Inc., the company behind the customer-facing brand of Spectrum, is a Fortune 70 company with a market capitalization near $100 billion. All portions of the project to be funded by Charter will be funded from the company's general construction budget. Full copies of Charter's most recent financials can be accessed here:

- Annual Report to Shareholders: https://ir.charter.com/financial-information/annual-reports
- SEC Filings: https://ir.charter.com/financial-information/sec-filings
- Annual Form 10-K for year ended December 31, 2021: https://ir.charter.com/static-files/63606f63-1b11-4d60-91a0-5395f1552592

Charter funds its construction projects using a centralized holding company planning model. For the proposed Project, Charter will aggregate needs and accumulate funds at the holding company level using a mix of available funding pools, including ongoing business free cash flow, existing credit lines, and new bond issuances, which could include high yield or investment grade bonds similar to those in our debt structure today. Our goal is to mix these resources as efficiently as possible. We continually evaluate our collective funding need and utilize funding mechanisms based on what is currently most advantageous for Charter. Our centralized funding entities will then disperse funds to the Charter affiliate participating in the Project to fund the Project on an as needed basis.

Charter has more than adequate cash flow to meet all Project obligations, including both initial construction and ongoing operation of the proposed network. Charter's free cash flow generally reflects the cash flow from our business that is available for investment, debt repayment, or for distribution to our shareholders in a given year. Free cash flow has already been reduced for our expected interest payments and normal capital expenditures. Charter's free cash flow in 2018, 2019, 2020, and 2021 was

$2.2b, $4.6b, $7.1b, and $8.7b, respectively. Collectively, our free cash flow, revolver capacity, and access to capital markets reflect more than sufficient resources to fund the proposed Project. In addition, consensus estimates of our ongoing free cash flow would be more than sufficient to fund our debt maturity obligations as they come due, along with allowing us to continue to operate our business, including the build-out systems.

March 17, 2022

Ms. Steffany Powell Coker
Secretary to the Commission
Public Service Commission of Wisconsin
4822 Madison Yards Way
North Tower - 6th Floor
Madison, WI 53705-9100

RE: FY 2022 BROADBAND EXPANSION GRANT APPLICATION

Dear Ms. Coker:

In response to The Fiscal Year 2022 Broadband Expansion Grant Cycle in collaboration with Spectrum Mid-America, LLC, by its manager, Charter Communications Inc. Charter ("Spectrum" or "Charter") hereby submits the enclosed Application, which we believe appropriately recognizes the urgency of the request and sets forth a straight-forward implementable plan to connect the most unserved and underserved homes utilizing the available funding.

Our proposal, if accepted, will deliver robust high speed internet with up to 1 gigabit per second ("Gbps") download and 500 megabits per second ("Mbps") upload speeds, to 379 locations identified in Spectrum's Application in Waupaca County, using fiber-to-the-premises (FTTP EPON) technology.

Charter has invested nearly $40 billion in infrastructure and technology nationally over the last five years as part of its long-term commitment to expanding broadband access across urban, suburban and rural areas to connect more Americans. In 2021, Charter extended its network to reach an additional 1.1 million new homes and businesses across the country, including an additional 41,000 in Wisconsin.

Backed by more than 3,591 local employees, $670 Million in capital investment in Wisconsin over the last two years, and a robust gigabit capable network, we are uniquely positioned to meet your objectives in a more efficient and meaningful way than any other applicant.

Charter recognizes the urgent need for extending access to reliable broadband to all its residents. Charter, through its Spectrum brand of companies, currently serves approximately 1.5 million customers in Wisconsin, and more than 32 million customers nationwide. Over an advanced communications network, the company offers a full range of state-of-the-art residential and business services including Spectrum Internet, TV, Mobile and Voice.

Our continued commitment to providing broadband in the State is further evidenced by our 2021 announcement to build more than 140,000 unserved locations in Wisconsin through the Federal Communications Commission's Rural Digital Opportunity Fund ("RDOF") auction. More than $668 million will be invested in Wisconsin, which includes an expected private investment of approximately $500 million by Charter and $168 million in support won by Charter in the FCC's RDOF auction. In Waupaca County we will be building 3,333 RDOF locations.

Each day that passes without connectivity increases the gap between those who have broadband and those who do not. We believe this proposal echoes the State's strong desire to bring connectivity to unserved and underserved residents of the state. Charter is excited for the opportunity to work with the Wisconsin Public Service Commission to bring continued major investment of broadband expansion in the State.

Please find the detail of our response enclosed. Again, we are pleased to be considered for such an important and ambitious project. Thank you for your leadership on this critical issue.

Sincerely,

Adam Raschka,
Regional Senior Director, Government Affairs

March 9, 2022

Steffany Powell Coker
Secretary to the Commission
Public Service Commission
North Tower, 6th Floor
Hill Farms State Office Building
4822 Madison Yards Way
Madison, WI 53705

Dear Ms. Coker,

I am writing today in support of Charter Communications (Charter) and Waupaca County's joint application for a broadband expansion grant for a project within the Town's of Dupont, Harrison, Wyoming and Helvetia as well as the Village of Big Falls. The Finance Committee has approved on appropriation of $330,000 towards the total project cost. This financial commitment by Waupaca County demonstrates the importance of the project and signifies our commitment to partnering with Charter on expanding broadband access within this county.

The Finance Committee is pleased to partner with Charter, particularly in light of the financial commitment offered by Charter to fund 29% of the project to reach 379 unserved and underserved locations.

The project will be a joint effort between Waupaca County and Charter, with Charter acting as lead applicant and assuming responsibility for the construction and operation of the proposed network. Funds requested in this application will be used solely for the purpose of constructing and installing broadband infrastructure throughout the designated grant area.

In support of Charter's efforts to complete the project, Waupaca County will work with and assist Charter in removing obstacles that arise outside of Charter's control, such as local permitting issues, pole attachments, and access to rights-of-way and easements. To the extent it is within its scope of authority, Waupaca County would work with Charter to help remove these types of obstacles.

This project is very important to the people of Waupaca County and will have a substantial impact on the community. Extending broadband service to this project area will provide economic development benefits for small businesses working hard to stay in operation despite the COVID-19 pandemic, support for remote and work from home employees, and support for those individuals who could re-enter the workforce if they could resolve childcare issues by working remotely. This project area will see similar benefits of broadband expansion on improved access to remote learning within the affected school districts.

This particular area is especially under or unserved by broadband. Waupaca County, in its planning efforts for broadband expansion has singled this area out as especially challenging. A wireline service would really be the only option given the topography and heavily treed nature of the region. This project represents quite the opportunity for people that have not had hope for quite some time.

We are committed to partnering with Charter to help ensure that they can accomplish a project of this size within the time constraints required by the grant award. We look forward to working with Charter

to deliver greater broadband access in Waupaca County and we respectfully request that the Public Service Commission grant the award to continue the important work of expanding broadband access in our county and especially this project area.

Sincerely,

DuWayne Federwitz – Chairman, Finance Committee

Dick Koeppen – Chairman, County Board of Supervisors

KEVIN PETERSEN

STATE REPRESENTATIVE

Representative Kevin Petersen
State Capitol 105 West
P.O. Box 8953
Madison, WI 53708
March 14, 2022

Steffany Powell Coker
Secretary to the Commission
Public Service Commission of Wisconsin
North Tower, 6th Floor
Hill Farms State Office Building
4822 Madison Yards Way
Madison, Wisconsin 53705

RE: Charter Communications FY 2022 Broadband Expansion Grants

Broadband is required to access the internet regardless the chosen technology used. Driving information, news, and entertainment; the internet keeps the world at our fingertips.

According to a Waupaca County study, 10 to 15 percent of the county's residents do not have access to the internet. Most constituents I've talked with while traveling through the district indicated they were dissatisfied with the quality and dependability of the service that is available.

Densely populated parts of Wisconsin have great internet and don't think twice about it, but broadband is patchy at best in rural areas.

I commend Charter Communications, Waupaca Online, the County of Waupaca, and Waupaca County Economic Development Corporation for working with the Wisconsin Broadband Grant Expansion Program. Residents need improved broadband service for business, education and telehealth. Without adequate broadband service, small businesses cannot operate efficiently, students are challenged to find internet in order to complete homework. In-home patient monitoring is next to impossible without good internet service.

Respectfully;

Representative Kevin Petersen
Wisconsin State Assembly
40th Assembly District
KDP/dsb

JOAN BALLWEG
STATE SENATOR · 14TH SENATE DISTRICT

March 11, 2022

Steffany Powell Coker
Secretary to the Commission
Public Service Commission of Wisconsin
North Tower, 6th Floor
Hill Farms State Office Building
4822 Madison Yards Way
Madison, Wisconsin 53705

RE: Support for the Charter Broadband Grant Application for Waupaca County

Dear Ms. Powell Coker,

It is my pleasure to write in support of the Charter Broadband Expansion Grant application.

As the state senator for the 14th Senate District, which includes Waupaca County, I fully understand the need for high-speed internet providers in rural, underserved communities. Internet access helps boost local economic development, allows students and families to study and work online, and creates a better technological landscape for telemedicine.

A well-facilitated broadband expansion in this area will help 379 homes and businesses. Waupaca County has committed $330,000 towards this application. Charter has been serving the area for years. Their service reputation has always been excellent, and I am confident they will be a good provider. I support them in their plans to expand broadband access to this area and address the need for high-speed internet access in rural communities.

I ask that you seriously consider the application, which will bring great value to the 14th Senate District and Wisconsin.

Please do not hesitate to contact me should you have additional questions.

Sincerely,

Joan Ballweg
State Senate
14th Senate District

Capitol Office: P.O. Box 7882 · Madison, WI 53707-7882 · (608) 266-0751 · Toll-Free: (800) 991-5541
Fax: (608) 282-3554 · Sen.Ballweg@legis.wisconsin.gov