



REQUEST FOR PROPOSAL

Fiber-To-The-Premise Feasibility Study

Abstract

The City of Charles City is seeking proposals from qualified firms to conduct a feasibility study for a fiber-to-the-premise network in Charles City, Iowa.

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Introduction

The City of Charles City is seeking proposals from qualified professional consulting firms to conduct a comprehensive feasibility study for a fiber-to-the-premise network in Charles City, Iowa. The service territory of this network will include every home and business within the city limits of the City of Charles City. The network should be capable of providing any or all telecommunications services to end users, including but not limited to internet service, pay TV service, and telephone service.

Project Background

Between 1994 and 2005, over two dozen communities in Iowa established municipal telecommunications utilities and constructed networks to serve those citizens. These utilities have a proven track record of providing reliable and affordable voice, video, and data services to their residents and putting those communities in charge of their own technological futures.

In 2005, citizens of Charles City approved a referendum to establish a municipal telecommunications utility by a majority of 62%. In 2010, a telecommunications study was conducted by Strategic Marketing Services at the University of Northern Iowa. Although the surveys conducted as part of the study were generally favorable to the concept of a community broadband network, no immediate action was taken by city leaders.

In 2014, concerned that the community may not be receiving the quality of telecommunications services needed to ensure its long-term health and viability, Charles City joined with ten other Iowa communities to study the feasibility of a fiber network to interconnect the communities. The study showed that this regional network, the Iowa Fiber Alliance, will greatly enhance the viability of new local fiber networks in communities like Charles City.

Following the Iowa Fiber Alliance study, the City commissioned a Community Broadband Engagement and Education Project to educate the community about the importance of broadband, to engage citizens in a conversation about the possibility of a community-owned solution, and to measure public opinion about a municipal fiber utility. The project, essentially a “pre-feasibility” study, showed strong public support of taking additional steps, including conducting a full feasibility study.

Charles City, Iowa

Charles City, Iowa is the county seat of Floyd County and the county’s largest community. The population in the 2010 U.S. Census was 7,652. Population declined by 2.0% between 2000 and 2010, a trend that has been experienced in other small rural communities in Iowa. In 2010 there were 3,440 households and 1,964 families within the city limits.

Community Broadband Engagement and Education Project

During 2016, the City conducted a Community Broadband Engagement and Education Project. The purpose of this study was to educate the community about the importance of broadband, engage the community in a conversation about the concept of a municipal fiber network operated as a city utility, and to measure opinions about existing providers and the likelihood that citizens will switch to a municipal fiber system if one were built. This “pre-feasibility” study provided the city council and broadband commission with clear direction that additional steps should be taken to explore a fiber network, including a full feasibility study and business case.

This report, available for your review at <http://bit.ly/CCBBReport> provides the market research that is normally needed during a feasibility study.

Iowa Fiber Alliance

Charles City has been an active participant in a pilot project to study the feasibility of a municipally-owned middle mile fiber network in northeast Iowa. The NE Pilot Project, later dubbed the Iowa Fiber Alliance (IFA), included 11 communities that either have existing broadband network or are considering them. Phase I of the project study, completed in 2016, was designed to identify the feasibility of the network as a way for these communities to share service architecture, aggregate bandwidth, and enable next-generation services.

The concept calls for each participating community to own and operate their own local access networks while collaborating and sharing service layer infrastructure, including but not limited to an IP video headend, a IP voice switch, and billing/CRM platforms. Much of this service layer infrastructure already exists in one or more IFA communities.

The next phase of the IFA project, the development of a detailed engineering and financing plan, is expected to take place after several participants, including Charles City, complete local feasibility studies. If built, Charles City will be an equal partner in the network’s ownership and operation, and will have access to service architecture from other IFA members.

The presence or lack of the Iowa Fiber Alliance will impact both capital and ongoing operational costs of a Charles City network and services. Consultant will account for these impacts in the Service Architecture section of the Scope of Services.

BroadNet Connect

BroadNet Connect, a division of Unity Point Health, has constructed fiber assets within the City of Charles City. The project was established utilizing a Broadband Technology Opportunity Program (BTOP) grant and connects with anchor institutions and businesses in Charles City. BroadNet Connect offers

broadband services, IT as a Service (ITaaS), and eHealth services to connections on its network. Consultant will account for possible use of this existing infrastructure in the Service Architecture section of the Scope of Services.

Scope of Services

Consultant will provide a network design and a cost estimate of sufficient depth to ensure that budgets are within a tolerance of $\pm 10\%$ of actual, and will prepare design for its completion should Charles City proceed to detailed design. A business case will be developed with outputs from the design/costing and revenue analysis for services. The revenue analysis will use data gathered by the Community Broadband Engagement and Education Project as a guide for market penetration and any further experiential data. Consultant will provide an exploration of business model alternatives that may be considered, alternatives for financing the network build, and an examination of legal and regulatory considerations.

1) Network Design and Cost Estimate

Consultant will include a network design for a FTTP network encompassing all fiber required for ubiquitous coverage across the service territory. Transport network interconnects, including those required for failover/redundancy must be included and costed for each service layer (e.g. Internet peering and connections to shared video and/or voice services.)

Access Network Architecture

1. The preliminary network design will enable the deployment of the following services:
 - a. Linear pay TV (cable TV) and OTT TV services. Pay TV service will include popular functions such as DVR/network DVR, TV Everywhere, and local video programming.
 - b. Telephone services.
 - c. Internet services, including at least 1 Gbps to every customer.
 - d. Bandwidth on Demand.
 - e. Other services that may be needed by residential or business customers within the service territory.
2. Design will be a passive optical network utilizing GPON. Design alternatives for next-generation PON (NGPON and/or XGSPON) will be provided along with anticipated schedules and cost estimates where knowable. An understanding of network trends affecting Charles City's investment horizon will be included for these next generation typologies.
3. Wherever technically feasible, the design will integrate software defined networking (SDN) and network function virtualization (NFV). If SDN/NFV is not technically feasible for initial deployment, the network design will allow for SDN/NFV deployment at some point in the future.
4. The design will leverage GIS-based tools that identify physical locations of all customer locations and other termination points. Existing community GIS data will be provided to the successful bidder. GIS work will provide a complete layer of all Charles City network connections, including assets of the water utility.

Service Architecture

As outlined above, Charles City is hopeful that the Iowa Fiber Alliance builds a transport network so that it can access service architecture from other IFA members. However, since the future of the IFA is not entirely under its control, the City must be able to consider various contingencies for how service architecture is deployed. Therefore, the feasibility study will provide analysis of costs and operational impacts of each of the following scenarios:

1. SCENARIO 1: IFA builds a fiber transport network of which Charles City has ownership rights. The City shares a proportional share of network construction and operations. The IFA aggregates internet bandwidth among members and provides at least two diverse connections to peering points. For video and telephone service architecture, Charles City receives services from other IFA members.
2. SCENARIO 2: The IFA is not built. Charles City still partners with another company for internet bandwidth, IP video, IP telephone switching services but provides for its own transport capacity by either leasing fiber or building fiber needed for redundancy.
3. SCENARIO 3: Charles City connects to another company for internet bandwidth using redundant built or leased fiber, but builds its own IP video headend and IP telephone switching capabilities.

An estimate of the City's investment in the IFA will be provided to the successful bidder. The Consultant chosen for this project will be provided with contact information for other IFA members that may provide service architecture.

2) Business Case

Utilizing the market data provided by the Community Broadband Engagement and Education Project and cost estimate of the network, the feasibility study will provide a business case and deployment plan for Charles City to directly provide broadband services to the community. The business case should include, but not be limited to, the following:

1. Annual cost of operations each year for the first ten years, including monthly data for the first three years. Account for all costs of operations, including but not limited to:
 - a. Debt service based on different financing models.
 - b. Operational costs, including bandwidth, video programming, voice switching, and other costs related to the provision of retail services.
 - c. Personnel costs, including a description of the human resources needed to operate a successful broadband company.
 - d. Billing, CRM, and other required systems.
 - e. Depreciation and equipment replacement.
2. Cash flow analysis based on various take rates for retail services at different price points.
3. Applicable financial ratios.
4. Data should be provided in both written form and electronically in the form of one or more Excel spreadsheets.

3) Business Model Alternatives

While it is the intention of Charles City to own the FTTP network and be the sole provider of services to end users, the feasibility study should include general information about other alternate business models, including the Open Access model and Public-Private Partnership (PPP) model. The discussion will include a discussion of the advantages and disadvantages of these alternate models versus a city owned-and-operated network.

4) Financing

The study will provide Charles City with detailed discussion of available financing options for network construction and deployment. Such options may include, but are not limited to:

1. General Obligation (GO) Bonds
2. Telecommunications Revenue Bonds
3. Other financing methods as recommended.

Your proposal will include costs to update the feasibility study and business case after a financing plan is put in place so that Charles City has an “as-built” business case to work from.

Qualifications

Proposing firm will demonstrate, at minimum, the following qualifications:

1. Demonstrated industry experience in network planning, engineering, and business development.
2. Demonstrated experience conducting FTTP feasibility studies of similar size and scope. Please provide at least three examples of FTTP feasibility studies that your firm has conducted and contact information for these clients.
3. Demonstrated experience with successful FTTP deployments by municipal fiber broadband providers. Please provide at least one example of a FTTP feasibility study conducted by your firm that led to a successful municipal FTTP project and contact information for this client.
4. Experience with and knowledge of the legal and regulatory environment in the State of Iowa.
5. Extensive financial planning experience with municipal broadband providers.
6. Demonstrated experience with completion of past projects on schedule and on budget.

Proposal Submission

Proposer’s response to this RFP will include, at minimum, the following elements:

1. A detailed response to each element of the Scope of Services listed above, including an estimated timeline for each element.
2. A statement of qualifications that addresses each of the elements listed in the Qualification section above.
3. A brief biography of each member of the Proposer’s project team.
4. A bid for completion of all work associated with this feasibility study.

All proposals that are submitted along with any information that accompanies these proposals shall be subject to Iowa's Open Records law as provided in Chapter 22 of the Iowa Code. All submitted material shall become property of the City of Charles City.

Proposal submission deadline is 12:00pm CST on May 5, 2017. Electronic submissions will be accepted.

Evaluation Criteria

Proposals will be evaluated by the Charles City Broadband Commission and City Council based on a variety of criteria including, but not limited to:

1. Experience with projects of similar size, schedule, and complexity.
2. Completeness of responses to the Scope of Services.
3. Qualifications of Proposer and project team personnel.
4. Responses of references from past projects.
5. Demonstrated experience and knowledge of next-generation network topology, including but not limited to SDN and NFV.
6. Price.

Charles City will evaluate all proposals that are submitted by the deadline (see timeline below). It is anticipated that the City will select 1-3 finalists from among these submissions who will be invited to make a presentation to the Charles City Broadband Commission and/or City Council. Such presentations may be conducted either electronically or in Charles City by mutual agreement of the City and finalist(s).

Charles City reserves the right to reject any and all proposals regardless of merit.

Timeline

The table below shows the anticipated timeline for selection of a vendor to conduct the feasibility study and delivery of the final feasibility study report. Charles City reserves the right to adjust this schedule as necessary.

Activity	Responsible Party	Deadline
Release Request for Proposal	Charles City	April 7, 2017
Proposer Questions Due	Proposers	April 21, 2017
Answers to RFP Questions Released	Charles City	April 28, 2017
Proposals Due	Proposers	May 5, 2017
Evaluation Period	Charles City	May 8-12, 2017
Finalist Presentation(s)	Charles City/Finalists	Week of May 15-19, 2017
Vendor Selection	Charles City	June 5, 2017
Vendor Start Date	Selected Vendor	June 12, 2017
Delivery of Final Feasibility Study	Selected Vendor	September 8, 2017

Contacts

Reponses to this RFP and all questions should be directed to:

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