

REQUEST FOR PROPOSALS



MARCELINE, MISSOURI

For Advanced Metering Infrastructure System

For Electric and Water Utilities

Proposals must be delivered to:
Richard Hoon, City Manager
City of Marceline
116 N Main Street USA
Marceline, MO 64658
660.376.3528

Proposal Due: September 13, 2017 @ 2:00 PM



To Whom It May Concern:

You are invited to submit your **Sealed** Proposals for the purchase of **ADVANCED METER INFRASTRUCTURE SERVICES** for the City of Marceline's Electric and Water Department. Specifications are attached hereto and are considered part of the RFP package. A notification email to ami-rfp@marcelinemo.us is requested if you intend to submit a proposal.

Sealed Proposals will be received by the City Manager at 116 N. Main Street USA, Marceline, MO until September 13, 2017 at 2:00 pm.

The City of Marceline reserves the right to accept or reject any or all received Request for Proposal.

Should you have any questions regarding this RFP, please submit them via email to ami-rfp@marcelinemo.us.

Sincerely,

Richard Hoon
Marceline City Manager

Invitation to Request for Proposals

The City of Marceline, Missouri is accepting **Sealed** Proposals for Advanced Metering Infrastructure System to serve the current and projected needs of the City. The City intends to seek the most cost-effective solution, based on the representative criteria contained in the Request For Proposals (RFP). Submittals received by the due date will be publicly opened on September 13, 2017 at 2:00 pm in the Council Chambers located at Marceline City Hall, 116 N Main Street USA, Marceline, MO 64658. The results will be publicly read aloud.

The City reserves the right to waive informalities in the bids and reject any or all bids for any reason whatsoever at the sole discretion of the City. The successful bidder will be notified in writing.

Please contact Lindsay Krumpelman, City Clerk, Marceline City Hall, 116 N Main Street USA, Marceline, MO 64658, [Phone: 660.376.3528; Fax 660.376.3898] or ami-rfp@marcelinemo.us with any questions, to receive the meter addresses and/or to receive a proposal specification package. RFP packages are also available at www.marcelinemo.us.

Richard Hoon, City Manager

1 TABLE OF CONTENTS *

2 INTRODUCTION

2.1 Project Overview

2.2 About the Buyer

3 GENERAL CONDITIONS

3.1 Reservations

3.2 Questions, Clarifications, Changes

3.3 Anticipated Schedule

3.4 Submission of Proposal

3.5 Proposal Requirements

3.6 Deviations to Specifications

3.7 Warranty

3.8 Interpretation

3.9 Errors in Proposal

3.10 Federal and State Laws

3.11 Prevailing Wage

3.12 Insurance

3.13 Payment Bond

3.14 Tax Implications

3.15 Service Manuals

3.16 Service

3.17 Equipment Specifications

3.18 Qualified Proposers

3.19 Ongoing Service Requirements

3.20 Evaluation of Proposal

3.21 Rights of Parties

3.22 Proven System

3.23 Installation Aspects

4 AMI SYSTEM OVERVIEW

4.1 Communications Method

4.2 Data Collection Network

4.3 Endpoints Units

4.4 System Control Computer and Software

4.5 Meter Data Management Software

4.6 Water Meter Specifications

4.7 Electric Meter Specifications

4.8 Endpoint Installation

5 PROPOSAL FORMAT

5.1 Executive Summary

5.2 Company Information

- 5.3 AMI System Overview Response
- 5.4 Project Management, Implementation and Conversion
- 5.5 Maintenance and Support
- 5.6 Training and Education
- 5.7 Financing Options (if available)
- 5.8 Additional Service Options (if available)
- 5.9 References
- 5.10 Cost Proposal**

6 PROPOSAL TERMS AND CONDITIONS

- 6.1 Request for Proposal Format
- 6.2 Bulletins and Addenda
- 6.3 False or Misleading Statements
- 6.4 Clarification of Proposal
- 6.5 Responsiveness
- 6.6 Rejection of Proposal
- 6.7 Bid Modifications
- 6.8 Late Submissions
- 6.9 Acceptance of Proposal

EXHIBIT A - PROPOSAL SUMMARY

PREVAILING WAGE SCHEDULE

*Highlighted sections have material changes from prior RFP.

2 Introduction

2.1 Project Overview

The City of Marceline’s primary objective is to contract with a qualified vendor to provide and install an Advanced Metering Infrastructure (AMI) System for Electric and Water Utilities. This RFP will cover a system-wide fixed network implementation. The City of Marceline wishes to obtain a system that provides the best long-term value over the system lifetime, while providing hourly readings (24 readings per day for 20 years).

The Proposer shall provide and may install all of the hardware and software that together comprise the proposed AMI system. This includes meters, meter registers (in the case of retrofits), meter interface units, wire and wire connectors, data collection units, handheld programmers (if necessary), AMI control computers, a meter reading database or meter data management system (MDMS), and related software and interfaces. The software should be able to integrate with **Tyler Technologies' Incode Software**, as that is what the City utilizes for their billing software.

The proposal must include all costs for network deployment and data collector unit installation, configuration, testing and training. All site preparation and installation costs must be reflected in the data collection unit pricing.

Respondents must provide at least five (5) references of water and electric combo utilities using the proposed system that has been installed or supported by the respondents for over 5 years. Include at least two similar sized communities to Marceline. Include at least one reference that is in the State of Missouri. Include how long the system has been in operation, the total size of the utility, and how many endpoints are currently deployed.

2.2 About the Buyer

The City of Marceline, or the “BUYER” is a municipality located in the Linn and Chariton Counties of the State of Missouri. The buyer operates electric, water and sewer utilities. Electric power is purchased from NextEra and distributed to approximately 2,233 residents or 1,242 electric connections. There are approximately 1,091 water units. The service area is approximately 3.5 miles. Marceline employs a City Council - City Manager form of government. The total operating budget is approximately \$9,000,000.00. The number of full- time employees for the City is 32 in 8 departments.

3. General Conditions

3.1 Reservations

The buyer reserves the right to reject any or all RFP responses or any part thereof and/or to waive formalities, if such action is deemed to be in the best interest of the buyer. However, items listed as strictly enforced shall be so enforced.

The buyer is requiring a proposal for all necessary components to acquire a Fixed Base AMI project. The Proposer must include all components and be willing to supply any component of the RFP which the buyer in its sole discretion shall award; the buyer will accept only those components that are deemed to be in its best interest.

The buyer reserves the right, no later than the signing of an awarded contract to change any number of meters to not include a disconnect feature. For example, meters that power Railroad Crossings, street lights, etc.

The buyer reserves the right to cancel any contract, if in its opinion, there be a failure at any time to perform adequately to the stipulations of these conditions and the RFP which is attached and made part of this document, or in case of any attempt to willfully impose upon the buyer materials or products or workmanship which are, in the opinion of the buyer, of unacceptable quality. Any action taken in pursuance of this stipulation shall not affect or impair any rights or claim of the buyer to damages for the breach of any covenants of the contract by the successful Proposer. The buyer also reserves the right to reject the RFP and/or any Proposer who has previously failed to perform adequately after having been awarded a prior contract. Should the successful Proposer fail to furnish any item or items, or to complete the required work included in the RFP, the buyer reserves the right to withdraw such items or required work from the operation of the RFP without incurring further liabilities on the part of the buyer thereby. All items furnished must be completely new and free from defects unless specified otherwise. No other items will be accepted under the terms and intent of the contract.

3.2 Questions, Requests for Clarification, and Suggested Changes

The contact designated and identified below, is the sole point of contact for the buyer regarding the RFP from the date of issuance until the selection of the successful Proposer. Proposers are invited to submit written questions and requests for clarifications regarding the RFP. The questions, requests for clarifications, or suggestions must be in writing and received by

Lindsay Krumpelman, City Clerk
 116 N Main Street USA, Marceline, MO
 Email: ami-rfp@marcelinemo.us

on or before 02:00 p.m, September 13, 2017 . The use of e-mail is encouraged. All inquiries should be marked “URGENT INQUIRY” “RFP – ADVANCED METERING INFRASTRUCTURE (AMI) SYSTEM”.

If the questions, requests for clarifications, or suggestions pertain to a specific section of the RFP, the page and section number(s) must be referenced. If a respondent discovers any significant ambiguity, error, conflict, discrepancy, omission, or other deficiency in this RFP, the respondent should immediately notify the City Clerk in writing of such error and request modification or clarification of the RFP document.

The buyer assumes no responsibility for verbal representations made by its officials or employees unless such representations are confirmed in writing and incorporated into the RFP. Proposers must inform themselves fully of the conditions relating to the proposal. Failure to do so will not relieve a successful proposer of his or her obligation to furnish all services required to carry out the provisions of this contract. The contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of, or interference with, the work of any other contractor.

3.3 Anticipated Schedule

The following is the current schedule as defined by the City of Marceline:

Action	Anticipated Date
Release and Issuance of the RFP	August 7, 2017
RFP Inquiries Deadline	August 21, 2017
Proposal Addendum Posting (if any)	August 25, 2017
Proposal Submission Deadline – 02:00 P.M. CST	September 13, 2017
Proposal Evaluation completed	September 28, 2017

Presentation to City Council
Anticipated City Council Award
Award Contract
Project Begin
Project Completion

Week of October 2, 2017
October 17, 2017
October 17, 2017 - November 21, 2017
TBD
TBD

3.4 Submission of Proposals

Proposers must furnish all information necessary to evaluate the bid proposal. Offers that fail to meet the mandatory requirements of the RFP will be disqualified. Verbal information provided by the Proposer shall not be considered part of the Proposer's response.

Proposers must submit the original and eight (8) printed copies of their Proposal, one (1) bookmarked pdf copy (entire proposal in one digital pdf document, with sections bookmarked), and supporting materials by:

September 13, 2017 – 02:00 P.M. CST

Send to:

| Richard Hoon, City Manager
116 N Main Street USA
Marceline, MO 64658

Clearly mark remitting Proposal: "SEALED PROPOSAL – Advanced Metering Infrastructure System “.

3.5 Proposal Requirements

This section outlines the information that must be included in your proposal. Vendors should review this list to ensure that their proposals include all requested information prior to submission.

1. The proposal must be signed and dated by a representative of the vendor's company who is authorized to negotiate contracts.
2. Vendors submitting proposals should allow for normal mail or delivery time to ensure timely receipt of their Proposal.
3. Failure to include any of the requested information within your Proposal may result in rejection/disqualification.
4. No negotiations, decisions, or actions shall be executed by the proposer as a result of any discussions with any City of Marceline official, employee and/or consultant. Only those transactions provided in written form the City of Marceline may be considered binding. Also, the City of Marceline will honor only written and signed transactions from proposers.
5. The costs of preparation and delivery of the bid proposal are solely the responsibility of the Proposer. No payments shall be made by the buyer to cover costs incurred by any proposer in the preparation of or the submission of a proposal in response to this RFP or any other associated costs.
6. The contents of each vendor's proposal, including technical specifications for hardware and software, and hardware and software maintenance fees, shall remain valid for a minimum of 120

calendar days from the proposal due date.

7. Please note that the City of Marceline may not purchase all the applications or all the equipment listed in this Request for Proposal
8. The City of Marceline will be awarding a contract to a single vendor for all core applications. Vendors are allowed to provide a proposal that includes subcontractors, but the City of Marceline will be entering into a single agreement with one vendor acting as a Prime. The Prime contractor will be responsible for the timeliness, quality, and deliverables provided by any subcontractors under the Prime contractor's agreement.
9. Vendors submitting proposals are required to fill out and include the Exhibit A-Proposal Summary with their proposal.

3.6 Deviations to Specifications

Proposals provided with deviations from stated specifications will automatically be rejected, unless signed written authorization has been received from the City acknowledging prior approval of deviations. On all required items, the Proposer shall indicate clearly the product (brand and model number). In addition, all deviations from the specifications must be noted in detail by the proposer, in writing, at the time of the submittal of the formal RFP response. The absence of a written list of specification deviations at the time of submittal of the RFP response will hold the proposer strictly accountable to the buyer to the specifications as written. Deviations not submitted, as required by the above, will be grounds for rejection of the material and/or equipment when delivered.

In such cases where a manufacturer's name or brand is specified, consideration of other brands will be made only if the said alternate brand is comparable and compatible with, or can successfully be substituted for the brand requested. It is the responsibility of the proposer to pre-qualify products or services that may deviate from the written specifications. Failure to pre-qualify alternative products or services prior to opening of the RFP will be cause for elimination of the product(s) and service(s) from consideration. To pre-qualify alternative products or services contact the City via ami-rfp@marcelinemo.us. Pre-qualification may require providing specifications, a sample product, and answering any and all questions concerning alternative product(s) and service(s). Pre-qualification is only authorized through written authorization signed by the City Manager.

Items that are listed as Strictly Enforced shall not be considered for substitution and shall result in immediate disqualification of the Proposer.

3.7 Warranty

All equipment, accessories, and component parts shall be guaranteed by the proposer to be free of defects in workmanship and design and to operate as specified and intended. The manufacturer's standard warranty or a minimum one year warranty, whichever is greater, shall be given to the buyer at time of acceptance. The effective date of the warranty shall be the date of functional operation and acceptance at 95% rate by the buyer.

COPIES OF THE MANUFACTURER'S WARRANTY SHALL BE INCLUDED WITH EACH RFP RESPONSE.

If, within the guarantee period, any defect or signs of deterioration are noted, which, in the opinion of the buyer, are due to faulty design and installation, workmanship, or materials, upon notification, the successful proposer, at their expense, shall repair or adjust the equipment or parts to correct the condition, or they shall replace the part or entire unit to the complete satisfaction of the buyer. These repairs,

replacements or adjustments shall be made only at such time as will be designated by the buyer as least detrimental to the operation of the business. **Proposer must be capable of processing warranty claims.**

3.8 Interpretation

Should any proposer have any questions as to the intent or meaning of any part of this RFP, he should contact the buyer in time to receive a written reply before submitting his response.

3.9 Errors in Proposals

Proposers or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting their response. Failure to do so will be at the proposer's own risk and cannot secure relief on the plea of error. Neither law nor regulations make allowances for errors by either omission or commission on the part of the proposer. In case of error in extensions or price in the bid, the unit price shall govern.

It shall be the responsibility of the proposer to make sure that his response arrives at the proper place and time as required in the RFP. The buyer takes no responsibility for a response mailed to the wrong place, or for a response received late due to error or delay caused by the Postal Service. The proposer should allow himself ample time and opportunity when hand carrying a response to the proper place, so that the response will be received on time.

3.10 Federal and State Laws

All items (equipment, products, accessories, and services) supplied by the proposer shall comply with all Federal and State standards, applicable and effective on the date of acceptance. All items must meet or exceed all existing Federal, State, and Local health, safety, lighting, emissions, and noise standards.

3.11 Prevailing Wage

1. The Agreement shall be based upon the required payment by the Proposer of the prevailing hourly rate of wage for each craft or type of workman required to execute the Agreement as determined by the Department of Labor and Industrial Relations of Missouri. Wage Schedule #24 of Prevailing Hourly Wage Rates will be made available upon request.
2. The Contractor shall comply in all respects with Sections 290.210 through 290.340 RSMo.
3. The Contractor and each Subcontractor shall keep an accurate record showing the names and occupations of all workmen employed by him, together with the actual wages paid to each workman, which shall be open to inspection at all reasonable hours by the representatives of the Department of Labor and Industrial Relations of Missouri and the Owner.
4. The Contractor is advised of the fact that the prevailing hourly rate of wages is subject to change by the Department of Labor and Industrial Relations or by Court decision as provided by law during the life of this Agreement and such change shall not be the basis of any claim by the Contractor against the Owner nor will deductions be made by the Owner against sums due the Contractor by reason of such change.
5. The "Prevailing hours of labor" for all classification of laborers, workmen and mechanics to be employed in the work are eight (8) hours per day and forty (40) hours per week.

3.12 Insurance

The Proposer will be required to provide the Owner Certificate of Insurance in a form acceptable to the owner providing coverage for Property Damage in the amount not less than \$1,000,000.00 per occurrence, Personal Injury in the amount not less than \$1,000,000.00 per occurrence, and total aggregate coverage of \$1,000,000.00. The Proposer shall carry and maintain Worker's Compensation Insurance for himself and all employees employed or performing on-site work pursuant to this Agreement. The City has made no inquiry as to the necessity for Worker's Compensation Insurance with the understanding and agreement that all reasonable inquiries will be made by the Proposer. Proof of said insurance shall be provided to the City prior to commencing the work.

3.13 Payment and Performance Bond

A Performance Bond and a Payment Bond each in the amount of one hundred percent (100%) of the Contract Price, with a corporate surety approved by the Owner, will be required for the faithful performance of the contract.

3.14 Tax Implications

The buyer shall pay no sales, use, consumer, and like taxes, when applicable. The proposer shall be responsible for securing at its sole expense any other necessary approvals, assessments, or required zoning changes. The buyer shall be responsible for personal property taxes and real estate taxes on the project. The proposer shall be responsible for all taxes measured by the proposer's income.

3.15 Service Manuals

The successful proposer shall supply the buyer with two copies (hard copy and electronic copy) of the operation and service manual at the time of project acceptance.

3.16 Service

Proposers shall list the name and address of the nearest authorized service location. Proposers must provide service phone number and describe the hours of duty.

3.17 Equipment Specifications

Proposed equipment must meet the specifications and guidelines as stated herein.

3.18 Qualified Proposers Only

It is the intention of the buyer to value service components after the sale as due and valuable consideration in this bid. As a provision of this requirement, all proposers shall meet the minimum requirements as follows:

1. The proposer must be the factory authorized distributor for the AMI system proposed and be capable of processing the warranty claims for the buyer.
2. The proposer must have an on-staff, factory trained AMI support specialist with the sole responsibility of providing AMI system support and sales.

3.19 Ongoing Service Requirements

Proposer must provide a detailed service plan for the ongoing AMI support. Service plan must detail options for providing service and technical support and meter inventory over the product usage period. Support services also need to be provided by in-house employees. Subcontractors will not be accepted.

3.20 The Evaluation of this Proposal Shall be Weighed as Follows:

Price	30%
Meets the System Qualifications	30%
Local Service and Support	30%
Quality of the RFP Response	10%

3.21 Rights of Parties

The buyer retains the right to award or not award the contract or any portion herein to the party most qualified in the buyer's sole discretion. Responding firms shall have the right to withdraw their response in the event that selection is not made within 60 days or final contracts are not negotiated. In this event, the buyer will have the right to choose from other subcontractors or re-list the work as outlined.

3.22 Proven System

The proposed Fixed Base AMI technology manufacturer must have produced a fixed base system that has been in commercial use for a minimum of five years and must have a substantial number of completed water and/or electric fixed base systems currently deployed. Of the deployed systems, the manufacturer must have at least five (5) combined water and electric account utilizing its technology. To ensure the reliability of the system proposed, the manufacturer must have in service an acceptable number (100,000 or more) of AMI endpoint transmitters of the proposed equipment type.

3.23 Installation Aspects

The Buyer requires that the turnkey installation package includes:

- Installation of new water and electric meters (the City may elect to install the meters themselves) and corresponding water endpoints (Installation Fees total listed as a separate line item and not built into the price of individual component)
- Activation of new endpoints
- Industry standard holes are to be cut/drilled into lids where applicable
- Electronically transfer new meter data to the utility billing software system (Tyler Technology - Incode)
- Provide or capture GPS data from meter location
- Digital photograph of meter reading before and after installation

4 AMI System Overview

4.1 Communications Method

- A. Explain how your radio frequency works and any licensing possessed/required.
- B. What is the normal endpoint transmit power? What effect does the transmit power have on the battery warranty?

- C. Describe the RF modulation used by the Endpoints (narrow band, spread spectrum, etc.). What are the advantages of this type of modulation? Is this modulation “off the shelf” or is it designed specifically for AMI applications? Can the transmissions be easily decoded by commercially available RF equipment?

4.2 Data Collection Network

- A. Proposer must provide an official RF Propagation Study from a licensed RF engineer or engineering firm that displays exact location and height of all data collection equipment and coverage patterns. The City will provide meter addresses for propagation study.
 - 1. The system as designed must provide for a meter read over a 4 day window for at least 98.5% of all meters in the service area.
 - 2. The study must identify all required collection infrastructure required for system operation.
 - 3. The study must identify any and all areas that are not covered in the propagation study. The Proposer shall provide and install any additional data collection equipment (receivers, collectors) required after endpoint deployment to achieve the coverage depicted in the RF propagation study.
 - 4. What provisions does the Proposer provide to ensure that the Utility will not have to purchase additional collector infrastructure due to system underperformance?
- B. Describe the ability of the system to provide overlapping coverage for a single meter.
- C. The system selected must have a 20 year operational life span. What warranties are offered on the Infrastructure? Is this warranty nationally published, or is the warranty being provided on a case-by-case basis?
- D. To avoid obsolescence and to allow for new technologies to be implemented, the infrastructure must utilize a configurable architecture that is capable of being updated and/or reconfigured remotely. How does your system allow for new technologies?
- E. The Utility wishes to maintain a Fixed Base Support and Extended Maintenance contract with the system Proposer.
 - 1. Outline specifically what is covered by the proposed Fixed Base Support and Extended maintenance contract. Does the contract include extended maintenance on the data collection units and overall network?
 - 2. Does the contract include labor to repair or replace damaged or defective data collection units?
 - 3. What is the response time of the proposer or proposer representative to repair damaged or defective data collection units?
 - 4. Are there any offerings for an expanded/extended service agreements/warranty available? If so, please provide a description and associated costs.
- F. The utility wishes to minimize the stocking requirements of the system components.
 - 1. Are collection devices (collectors, receivers) built specifically for the utility, or universal?

2. Are the frequencies on these devices hard-coded or configurable per utility via software-defined radios?
- G. Describe the primary data collection units (receivers, collectors) backhaul communications system (Ethernet, fiber, etc.). What is required to maintaining the backhaul system?
 - H. Primary data collection units (receivers, collectors) shall be capable of retaining at least 30 days of hourly reading intervals from all meters in their coverage area in the event that backhaul is lost or becomes unavailable for a period of time.
 - I. I. All data collection hardware (receivers, collectors, etc.) shall have on-board battery backup in the event of primary power interruption. How long will data collection devices continue to operate on battery power if primary power is lost? Describe battery backup for each type of device proposed. What is the life expectancy for the Backup Batteries and warranty?
 - J. What provisions are built into the system to prevent hourly data history loss in the event that a data collector fails and cannot be repaired for 3 to 4 days?
 - K. Proposers may submit their RF Propagation study maps in advance to the City for review, if they so choose (The 5 addresses that were removed via Addendum 1 of the prior RFP were removed from the meter address list provided with this RFP).
 - L. Please list accuracy range of your GPS in relation to actual meter location.
 - M. Please include in your final proposal a map with shading to designate estimated coverage per your proposal.

4.3 Endpoint Units (Antenna should have the capability of being remotely mounted)

- A. For non-pit applications
 1. The water endpoint electronics must be hermetically sealed in a high density polyethylene (HDPE) enclosure that is waterproof and provides operating temperature range of -22 F to 165 F (-30 C to 74C).
- B. For pit or vault applications
 1. The endpoint shall be water submersible, capable of operating in 100% condensing humidity and provides operating temperature range of -22 F to 165 F (-30 C to 74C).
 2. The endpoint antenna shall be designed to be installed through the industry standard 1 3/4" inch hole in a pit lid (cast iron meter boxes with cast iron pit lid) with no degradation of transmission range. The antenna will be capable of mounting to various thicknesses of pit lids from 1/2" to 1 3/4" inch.
- C. Preference will be given to systems which can connect to meters without wire cutting or splicing. Describe connection method between endpoint and register. Is the battery sealed inside the unit or external?
- D. Endpoints shall provide a 20 year battery warranty while delivering hourly readings (24 readings per day). Describe any limitations in battery which would result from delivering 24 readings per day.

1. Does the endpoint battery warranty include a replacement battery, or will a complete endpoint be furnished in the event the endpoint battery fails within the warranty period? If the warranty includes a replacement battery, describe the process for testing, diagnosing and replacing the endpoint battery.
 2. List any costs for connection (splicing) equipment required to replace the battery.
 3. Is this warranty nationally published, or is the warranty being provided on a case-by-case basis?
- E. To avoid obsolescence, the endpoints must utilize a configurable architecture that allows new technologies to be implemented. How does your system allow for new technologies to be implemented using the current hardware? Can your endpoints be updated and/or reconfigured remotely.
- F. The water endpoint must be capable of being received by either a handheld receiver, mobile receiver or fixed network receiver without special configuration or remanufacture.
- G. The endpoint must transmit the meter reading and a unique endpoint ID number.
- H. The endpoint must be capable of time synchronized reading to enable the water entering the system to be reconciled against the water that is consumed to aid in identifying system leaks.
- I. The endpoint must be capable of hourly reading the meter (24 readings per day) and transmitting the readings to the utility every 6 hours (4 transmissions per day - minimum).
1. How often are hourly readings transmitted by the endpoints?
 2. Is hourly reading mode standard or an option?
- J. Endpoints shall transmit prior reading intervals in each transmission for redundancy. What is the ability of the system to prevent data loss in the event transmissions are not received for several days, or the data collection units are not operational for a period of time? How long can a data collector be down before hourly reading intervals are no longer available from the endpoints?
- K. The utility must be able to poll the endpoint to obtain current information.
1. Customer service personnel require the ability to the poll current meter information Can the endpoints be polled for their current reading? How long does it take for the meter to respond?
 2. Describe how the 2-way network functions, including the time it takes for changes to occur on the endpoint after sending a 2-way command.
- L. Endpoints shall have a leak detection alarm.
- M. Endpoints shall have a reverse flow alarm.
- N. Endpoints shall have an alarm indicating the endpoint failed to successfully read the water register.

- O. Endpoints shall have an alarm that indicates the battery is near the end of life.
- P. Endpoints must be available for compound water meters. Does your system accommodate compound meters using an endpoint for each register or a single register? Describe any limitations on the 20 year battery warranty when operating in dual port configuration, using a single endpoint if available, and while delivering hourly reading history.
- Q. Endpoints shall transmit reading data at least four (4) times per day to ensure up-to-date reading data for all meters on the system without user intervention. Describe how much hourly reading history is included in each transmission?
- R. Endpoints shall transmit both Endpoint ID and Register ID to ensure that accounts are properly billed after register changes occur in the field. Endpoints which transmit only the Endpoint ID will not be accepted.
- S. Endpoints shall be capable of detecting and transmitting a “cut wire” condition between the register and endpoint. Endpoint shall not continue to transmit the last good reading after a “cut wire” condition exists. Describe how the system detects and reports “cut wire” conditions.
- T. Endpoints shall store and transmit their GIS Coordinates for system diagnostic purposes. Alternately, the system must allow for GIS Coordinates to be stored in the Head-End for diagnostic purposes. If GIS coordinates must be collected separately during installation, costs to collect, store and present GIS Coordinates via the Fixed Base software must be reflected in the system proposal.
- U. Endpoints shall be capable of transmitting 8 register wheels from the meters proposed.
- V. Endpoints shall be capable of transmitting meter resolution as fine as 0.25 US Gallon for meters up to 1 inch, and as fine as 10 US Gallons for meters up to 8 inch.
- W. Please explain how your system communicates a power outage. Include estimated times for alarms and notifications (text or email alert). Also, please address how your system differentiates between a tripped breaker/blown fuse and a blink and how it accommodates a dip or automatic reclose function.

4.4 System Head-End Control Computer and Software

- A. Describe the Control Computer hardware. Describe failover and disaster recovery provisions built into the Control Computer architecture. Is the data stored in more than 1 location?
- B. What is the scalability of the Head-End software and Control computer? Does the proposer have any references of similar sized (or larger) utilities successfully using the system?
- C. The Head-End Control Computer shall store at least 13 months of hourly reading history for all meters in the system. Describe the capability to analyze the stored hourly reading data. Is the data stored in an ODBC compliant database (for example, Microsoft SQL or similar)? Can the utility access the data within the database for other applications beyond what is provided by the Proposer?
- D. The system shall have the ability to export data to 3rd party software applications via CMEP, XML, direct database interface, or similar. The system proposer shall place no restrictions on

exporting data to 3rd party software applications. Describe any installations where interface to a 3rd party software platform has been achieved.

- E. The Head-End Control Computer must provide data security and reliability. Describe the Control Computer architecture and underlying database, and any provisions for ensuring that data is not lost once received by the Control Computer.

- F. The data management software shall have user-defined queries to analyze consumption patterns and system alerts. Pre-defined analytics are acceptable as long as users can also manually adjust query parameters based on preferred values.

- G. The system diagnostic software shall include a mapping interface to graphically report Endpoint and collection system equipment location and performance. The mapping interface shall be capable of reporting the following parameters:
 - 1. Hourly Read Interval Success percentage over 30 days for each endpoint

 - 2. Transmission latency of each endpoint

 - 3. Alarm conditions

- H. The system diagnostic software shall be capable of generating reports, tables and text files which contain the following criteria at a minimum:
 - 1. Endpoint Installation Date

 - 2. Endpoint Raw transmit success over 30 days (percentage of transmissions received)

 - 3. Endpoint Read Interval Success (percentage of hourly readings successfully received) average over 30 days

 - 4. Alarm condition

4.5 Meter Data Management Software

- A. Basic capabilities
 - 1. The AMI Software shall comply with prevailing industry standards and should run on a Windows-compatible computer.

 - 2. The AMI Software must exist as a browser-based application that runs on a server.

 - 3. What is the scalability of the AMI software and Control computer? Does the Proposer have any references of similar sized (or larger) utilities successfully using the system?

- B. Import / Export capabilities
 - 1. The AMI Software must be able to export data to Microsoft Excel and Adobe PDF formats.

2. The AMI Software must interface to the utility's CIS/billing software, which is Incode software through Tyler Technologies.
3. The AMI Software must support GPS type data to identify locations of account geographically.

C. Meter Data

1. The AMI Software shall provide the ability to process hourly time-stamped meter reading taken from all water meters and verify the percentage of reads received for particular areas and/or selected meter routes. This data must then be exposed to various configurable parameters set, such as high/low parameters to assure the accuracy of the data.
2. The AMI Software must be able to search for records matching specified information.
3. The AMI Software must provide the following data to the utility on a daily basis for monthly billing applications:
 - i. Hourly time-stamped meter reading taken from all water meters for monthly billing purposes
 - ii. Hourly usage/consumption readings for resolution of customer billing disputes and improved customer service
 - iii. Alarm data received (Leak, reverse flow, broken pipe, non-read, non-numeric read) for identification of customer site problems.
4. The AMI Software must be able to support demand read capability to the meter.
5. The AMI Software must provide the capability to store all meter data information obtained from the base station's for 13 months.

D. Meter Data Analytics (MDA)

1. The AMI Software must provide configurable validation routines with parameters defined at the meter, group or population level. Parameters must accommodate seasonality (different settings for different dates).
2. The AMI Software must allow the utility to elect whether failure of a validation test is automatically corrected, noted and accepted, or rejected for manual review.
3. Validation routines should be highly configurable without the need to write code or create scripts.
4. The AMI Software must perform vacant consumption analysis - The AMI Software must list meters that are currently vacant but have reported consumption since the cut date.
 - i. Restricted use analysis - The AMI Software must identify high consumption during restricted times.
5. Does your AMI software allow the user to create analytical data on groups of meters based on attributes or on an ad hoc basis for reporting purposes (virtual metering). Please expand on capabilities beyond yes and no and provide an example scenario.

E. Meter Data Reporting (MDR)

1. Please list the names of all standard reports available with a brief description of each.
2. Describe the ability of your system to customize reports?
3. The AMI Software must have the ability to alert appropriate personnel of certain triggered alarms. Please supply a list of various delivery or alarms.
4. Users must be able to define and add new items or assets, and add reports for those items or assets.
5. Users must be able to define and add new attributes for items and assets, and add reports for those attributes.
6. The AMI Software must provide a geo-spatial/map view that includes:
 - i. Display of meters, transformers and AMI communications assets
 - ii. Configurable layers, filters and color coding to differentiate meters, e.g. by communication status
 - iii. Incorporate utility GIS layers to view on same map
 - iv. View assets with events on map

F. Hosting

1. The proposer should host the AMI software on server hardware at a remote secure data center.
2. The proposer will provide upgrades the AMI software to Latest Releases, Including all security patches and updates.
3. The proposer will maintain a web portal access to the AMI software.
4. The proposer will submit a daily file containing consumption reads and all available alarms collected by the network, including exception reports such as zero Consumption Reads, non-responding meters (including traceability to the meter location when the utility provides the meter location codes)
5. The proposer will provide 24x7x365 server and network monitoring using diagnostic software tools.
6. The proposer will provide secure, off-site vaulting of encrypted backup tapes containing one year of history for auditing purposes.
7. The proposer will provide a disaster recovery solution via data replication to a fault tolerant data center with 1 business day or less recovery time.

4.6 Water Meter Specifications

The following water meters are approved and any deviation from the list will need to be preapproved by contacting the City via the ami-rp@marcelinemo.us and acquiring written permission from Roger Sullivan and City Manager Richard Hoon.

A. Badger Water Meters

1. "E" series, Compound Series, and Turbo Series

B. Sensus Water Meters

1. Iperl Series and Omni Series

4.7 Electric Meter Specifications

- A. The City has a SURVALENT SCADA system. Explain how your system will interface with this system.
- B. The following electric meter manufacturers are approved and any deviation from the list will need to be preapproved by contacting the City via ami-rfp@marcelinemo.us and acquiring written permission from Todd Field and City Manager Richard Hoon.
1. Aclara, Honeywell/Elster, Itron, Sensus
 2. All Form 2S residential meters need to be priced to include a disconnect feature pre-installed.
 3. The City reserves the right, no later than the signing of an awarded contract to change any number of meters to not include a disconnect feature. For example, meters that power Railroad Crossings, street lights, etc.

4.8 Endpoint Installation

- A. Endpoint and Network Installation Contract Management.

Proposer shall manage installation of meters and transceivers. The Proposer shall:

1. Specify the installation methods, noting hole cut/drilled in lids where necessary-
2. Train the installation service providers
3. Manage the installation performance
4. Provide daily, real-time project status updates via Project Management Software
5. Provide photographic evidence of retired and new meters at each installation address.

- B. Scope of Work

Proposer shall describe its proposed installation approach to managing the network, meter and endpoint installations. All meters shall be replaced and placed back into service as soon as possible. No service shall remain out of service without prior approval. Provide a complete workflow for end to end installation process.

- C. Installation Sequence.

Proposer shall conduct installations by groups of accounts (e.g., routes). Groups should be based on geographic proximity as determined by the buyer in discussion with proposer. Unless approved in writing by the Buyer, Proposer shall complete at least 90 percent of the installations

in one group before commencing installation on the next group.

D. Installation Schedule.

City and proposer shall establish an overall schedule for installation of each phase of the project. By 7:30 AM on the first business day of each week, proposer will provide buyer a schedule of where work is planned for that day and each subsequent day of that week. The purpose of this information is to provide coordination and communication between the buyer and proposer/installer for the work. If the schedule changes for whatever reason, an updated daily schedule shall be forwarded.

E. Twenty-Four (24) Hour Customer Access During Installation Process.

For (ninety) 90 days after buyer has been notified of a given installation (by date), proposer must respond on a 24-hour-per-day basis to calls from the buyer or from the customer associated with that installation, concerning leaks, loss of service, low pressure, and other problems associated with installation. Proposer must respond within thirty (30) minutes receiving the call and arrive at customer's premises ready to correct any problems within thirty (30) minutes of receiving the call.

F. Response to Complaints.

Should the proposer or its installation contractor receive a call or complaint from a customer or the buyer regarding installation, the proposer/contractor shall immediately log the call, including caller's name, address, account number if available, date and time of call, nature of problem and the action taken. Copies of all call logs shall be forwarded to the buyer Contract Manager not less than once per day.

G. Improper Installations.

The proposer/contractor shall be responsible for replacing any meter, MIU or appurtenances improperly set and for correct any damage to couplings, threads, unions or meters by use of improper tools or cross threading by a contractor installer.

Any water service lines, meter couplings, meter valves, service fittings, irrigation lines, sprinkler heads, meter boxes or lids damaged during excavation or installation shall be repaired and water tested, PRIOR to any backfill or pouring of sidewalk or concrete pad.

All existing landscaping, ground cover, grass, plants, shrubs, and/or trees which are damaged during construction shall be replaced with the same type or approved variety within 48 hours.

H. Material Scrap/Disposal

All debris resultant from the proposer's excavation or construction operation shall be removed from each installation site the same day at the proposer's expense. No excess materials shall be dumped on private property or deposited into the storm drains or sewer. All materials removed shall be staged at designated area at the City's Power Plant.

The selected proposer shall be responsible for collecting and storage (on City's property) of all scrap meters and shall provide full accounting by size and type.

I. Leaks after Installation.

The proposer/contractor shall be responsible for correcting any leaks at the valves, couplings or service lines that could reasonably be attributed to the meter installation if reported by the buyer or customers within ninety (90) days of installation.

J. Installation Control and Audit Procedures.

Proposer shall describe in detail its proposed system for ensuring that all data pertaining to installation is correctly recorded during installation, and that all data transferred to the CCS is accurate. Proposer shall describe procedures for eliminating any opportunities for a meter or MIU to be associated in the control computer or the CCS with the wrong address or account number.

K. Installation/Field Testing Control Hardware and Software

A separate software program and server or control computer may be used to manage field installations of MIUs, and manage portable field test units/interrogators/programmers. If so, provide details of this software and hardware in this section.

L. Interface to AMI Control Computer.

Describe the mechanism and procedure for downloading and uploading data from the portable field unit control computer to the AMI control computer and/or any other information system (e.g., a work order management system) normally used in the maintenance of the AMI system.

M. Warranty

All installation work, including materials used in the installation performed under this contract, shall be guaranteed against defects in workmanship for a period of one (1) year from the date of installation acceptance.

5 Proposal Format

Please include the following items in the order listed below:

Cover Letter

Table of Contents

1. Executive Summary
2. Company Information
3. AMI System Overview Response
4. Project Management, Implementation, and Conversion
5. Maintenance and Support
6. Training and Education
7. Financing Option (if available)
8. Additional Service Options (if available)
9. References
10. Proposal Summary (Exhibit A in RFP)

5.1 Executive Summary

This section should be limited to a brief narrative highlighting the vendor's proposal. The summary should be free of technical language and should illustrate the benefits and possibilities offered by the vendor. It should be between one (1) and five (5) pages long. There should be no cost quotes in this section.

5.2 Company Information

Vendor must provide the following information about the vendor's company that demonstrates its stability and ability to support the commitments set forth in the RFP. The vendor should outline the company's

background, including:

- How long the company has been in business.
- A brief description of the company size and organization.
- Number of customers in Missouri and bordering states.
- Total number of customers.
- Company organizational chart.
- Number of employees by department:
 - * Customer Services
 - * Sales & Marketing
 - * Research and Development
 - * Administration
- Description of research and development approach and process.
- Financial data, including the most recent audited financial statements.

5.3 AMI System Overview Response

Proposer must respond to the items in the AMI System Overview of this request for proposals.

5.4 Project Management, Implementation and Conversion

- A. The City of Marceline will provide a designated project manager and expects the proposer to do the same.
- B. Include a preliminary implementation schedule for all applications, including the required time for system and application training, program testing, and conversion.
- C. Conversion is expected for utility billing and financial software system information and anything currently being utilized on the current system.

5.5 Maintenance and Support

The City of Marceline prefers 24/7 unlimited telephone support. If 24/7 telephone support is available, price proposals should clearly indicate total recurring costs for that support option. If after-hours support is only available at an hourly rate, this should be clearly indicated.

- A. Please describe all support services for hardware and software, including:
 - 1. Hours of availability
 - 2. Access via toll free 800 number
 - 3. Call tracking system
 - 4. Priority code system used to help distinguish the level of urgency for each call
 - 5. Internet web site support
 - 6. How customers are notified of urgent software issues and how to resolve them
- B. List regional representatives and specify the closest one to the City of Marceline
- C. Provide information about periodic system enhancements and updates.

5.6 Training and Education

Systems and application software training is key to systems selection and implementation. All training must be conducted on site. System administrator training, as well as user training, should employ a train-the-trainer approach. Address the following:

- A. Available software and hardware training
- B. Ongoing educational opportunities
- C. Available web conferencing training
- D. Scheduled year-end processes training

5.7 Financing Options (if available)

If Vendor has financing options for this project please included them in this section for 5, 7, 10, and 15 options available. Include the terms associated with each financing options. Include the interest rate and annual payment breakdown under Exhibit A in addition to this section.

5.8 Additional Service Options (if available)

If Vendor has additional service options available for this project not covered in this RFP, please add them to this section.

5.9 References

Provide references for a minimum of five (5) completed government installations that use the proposed system in a comparable environment. Where possible, at least one such reference should be in the state of Missouri. The information should include municipality name, address, contact name, telephone number, date of installation, and a list of applications.

5.10 Cost Proposal

Please provide all costs for the proposed system, using Exhibit A.

6. Proposal Terms and Conditions

6.1 Request for Proposal Format

Proposals must be made in strict accordance with the Request for Proposal format provided herein.

6.2 Bulletins and Addendums

Any bulletins or addendums to the Proposal specifications issued during the period between issuance of the RFP and receipt of proposals are to be considered covered in the Proposal and in awarding a contract they will become a part thereof. Receipt of bulletins or addendums shall be acknowledged by vendors in their proposal cover letter.

6.3 False or Misleading Statements

If, in our opinion, a proposal contains false or misleading statements or references that do not support a function, attribute, capability, or condition as contended by proposer, the entire proposal shall be rejected.

6.4 Clarification of Proposal

We reserve the right to obtain clarification of any point in a vendor's proposal or to obtain additional information necessary to properly evaluate a particular proposal. Failure of a vendor to respond to such a request for additional information or clarification may result in rejection of the vendor's proposal.

6.5 Responsiveness

Proposals should respond to all requirements of this RFP to the maximum extent possible. Vendors are asked to clearly identify any limitations or exceptions to the requirements inherent in the proposed system. Alternative approaches will be given consideration, if the approach clearly offers us increased benefits.

6.6 Rejection of Proposal

Proposals that are not prepared in accordance with these instructions to vendors may be rejected/disqualified. If not rejected, the City of Marceline may demand correction of any deficiency and accept the corrected Proposal upon compliance with these instructions to proposing vendors.

6.7 Bid Modifications

Any bidder may modify their bid by written or fax communications up to two days prior to the closing time. The written or fax communication should not reveal the bid price as this will not be known until the sealed bid is opened.

6.8 Late Submissions

Regardless of cause, late qualifications will not be accepted and will automatically be disqualified from further consideration. It shall be the Vendor's sole risk to assure delivery at the designated office by the designated time. Late qualifications will not be opened and may be returned to the Vendor at the expense of the Vendor or destroyed if requested.

6.9 Acceptance of Proposals

The contents of the proposal of the successful bidder will become, at our option, a contractual obligation if a contract ensues. Failure of the successful bidder to accept this obligation may result in cancellation of the award.

Proposals submitted are offers only and the decision to accept or reject is a function of quality, reliability, capability, reputation, and expertise of the proposing vendors. The City of Marceline reserves the right to terminate the selection process at any time and to reject any or all proposals.

The City of Marceline reserves the right to accept the Proposal that is, in its judgment, the best and most favorable to the interests of the City of Marceline and to the public; to reject the low price Proposal; to accept any item of any Proposal; to reject any and all Proposals; and to waive irregularities and informalities in any Proposal submitted or in the Request for Proposal process, provided; however, the waiver of any prior defect or informality shall not be considered a waiver of any future or similar defect or informality. Proposing vendors should not rely upon or anticipate such waivers in submitting their Proposal.

EXHIBIT A - PROPOSAL SUMMARY

Equipment & Services:	Quantity	Unit Price	Ext Price
Equipment:			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Infrastructure Subtotal	_____	_____	_____
Endpoint			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Endpoint Subtotal	_____	_____	_____
Server & Software			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Server & Software Subtotal	_____	_____	_____
System Services			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
System Services Subtotal	_____	_____	_____
Equipment and Services Grand Total	_____	_____	_____

	Quantity	Unit Price	Ext Price
Meters:			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Meter Grand Total	_____	_____	_____

Project Subtotal	_____	_____	_____
Installation Charges	_____	_____	_____
Option 1 Project Installed Grand Total	_____	_____	_____
Option 2 City Installs Electric & Water Meters Grand Total	_____	_____	_____
Option 3 City Installs Electric Meters & Vendor Installs Water Meters Grand Total	_____	_____	_____
Option 4 City Installs Water Meters & Vendor Installs Electric Meters Grand Total	_____	_____	_____

Annual Support & Maintenance:			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Annual Support & Maintenance Total	_____	_____	_____

	Interest Rate	Monthly Payment	Annual Payment
Financing Options:			
5 Year Term	_____	_____	_____
7 Year Term	_____	_____	_____
10 Year Term	_____	_____	_____
15 Year Term	_____	_____	_____