

**City of Delaware  
Request For Proposal – Meter Automation**

**Addendum No. 1  
August 21, 2015**

**Proposals are due September 17, 2015 by 12:00 pm (Noon) EST.**

**Scope adjustment:**

The current RFP indicates meters installed before January 2000 will be replaced along with potentially newer meters that have incompatible registers. However, the City wishes to clarify that only residential sized meters (5/8", 3/4", and 1") will be replaced under the meter/register if found to be incompatible with the MIU/Endpoint (likely pre-January 2000). Larger meters will not be replaced as part of this project, regardless of the install year. If a larger meter is found to be incompatible with the MIU/Endpoint, the work order shall be returned to the City.

The City also wishes to clarify that although estimated quantities by expected job type are provided for cost comparison purposes, the City wishes the proposer to always attempt to install the MIU/Endpoint with the existing meter as the first preferred option.

**Answers to questions:**

1. **Will the 4,500 Indoor mounted meter be retrofitted to the outside? If not can you give some clarity of where these units are located, basement, rafters, etc.?**

Answer: The approximate 4,500 indoor mounted meters are typically located in basements and other portions interior to the structure. The indoor meters are currently connected to an exterior remote reading device (such as a remote register or touchpad) via a 2 or 3 conductor wire. The City anticipates slowly moving these meters to outdoor pits while completing the AMI meter upgrade. The ultimate location for the Endpoint will either be in a shallow pit located in front of the property in a similar fashion to the existing 7,500 outside meters or mounted on the exterior of the property via a wire to the indoor meter.

2. **Is your service line piping copper, cast or poly? Are your service mains ductile, pvc or concrete? If you have mixture that % would work also per service line and per main.**

Answer: A majority of service lines are commonly copper inside pits (roughly 80—90%), while others could be galvanized or other poly manufactured materials. Service Mains are primarily ductile iron (roughly 90%), or PVC or HPPE.

3. **Will the City consider extending the due date?**

Answer: The City believes there is sufficient time for Proposers to prepare a detailed technical response within the current schedule. The City does not anticipate extending the due date unless a specific documented hardship is presented.

4. **Is this a State of Ohio Prevailing Wage project? If so, what are the required job classifications & labor rates?**

Answer: The City does not believe this to be an Ohio Prevailing Wage project.

5. **What are the specific encoders on the meters that are not to be replaced as part of this project? Will the City replace the encoders that currently have a pulse output?**

Answer: If pulse registers (typically Zenner) are not compatible, Proposer should recommend replacement of existing (incompatible) meters. It is not the City's intent to retrofit/replace existing registers. If the MIU is not compatible with existing register, the meter and register shall both be replaced. Page 5, Section 3.2: "residential meters installed before Jan 2000 shall be replaced along with potentially newer meters that have incompatible registers (est. 3000)." If a larger meter (1.5" and larger) is found to be incompatible, the work order shall be returned to the City.

6. **Is it the understanding that no AMR/AMI compatible *competitive* registers will need to be supplied for this project? Will the City obtain and provide them to the installer?**

Answer: It is not the City's intent to retrofit existing meters. If the existing registers are not compatible with the proposed AMI system, the existing meter will need to be replaced in whole and supplied by Proposer. If a larger meter (1.5" and larger) is found to be incompatible, the work order shall be returned to the City.

7. **Page 5, Section 3.3 Table:**

- a. **What is the meter size breakdown for the 7,445 outside meter locations?**
- b. **How many meters and of what size will need to be replaced vs. retro-fit with AMR/AMI endpoints?**

Answer: There will be no retrofits (new register/old meter body). See Attachment B for a breakdown by size for outside installs: For residential meter sizes pre-2000 a full replacement is likely for residential meter sizes after 2000 and after, an MIU/Endpoint installation is likely. If a larger meter (1.5" and larger) the meter/register shall be utilize to install an MIU/Endpoint (regardless of install year). If it is found to be incompatible, the work order shall be returned to the City.

8. **Page 6, Section 4.1: Are there any federal, state, county, and or municipal laws, regulations, and or ordinances that the City feels would greatly impact the proposed project?**

Answer: No.

9. **Page 6, Meter Pit Lid Pictures:**

- a. **What are the current meter pit lid dimensions? i.e. inside diameter, outside diameter, ring lip depth?**
- b. **Who is the City's meter pit lid/ring vendor?**
- c. **Who is the manufacturer of the City's meter pit lids/rings?**
- d. **How many and of what size meter pits are located in traffic rated areas – excluding driveways?**

Answer: The City is requiring the vendor try to use the existing lids if possible to minimize costs. Existing lids associated with residential meters most often contain a 1-7/8" hole diameter and are generally 1" in thickness. The lids are commonly not located in traffic rated situations.

The City does not maintain an inventory of meter pit lids dimensions and traffic/non-traffic rated locations.

10. **Page 12, Section 5.1: “The City will facilitate access to city owned facilities for system installer and support the vendor with the installation of data collection units (DCU). Does the “support the vendor with the installation of data collection units (DCU)” include supplying AC power to a designated location at a City owned facility to power data collection units?**

Answer: Yes, however the City is requesting proposers to use facilities with power before exploring other options where power may need to be added. Corresponding costs to use City resources to facilitate adding power will be factored into the cost analysis.

11. **Page 12, Section 5.2: “wire and wire connector...” Is it to be assumed, based on the City’s current installed meter population that new AMR/AMI endpoints will need to be *spliced* into existing AMR/AMI compatible encoder registers?**

Answer: Yes, If existing registers are compatible, then it is preferred that existing meters/registers be spliced to new MIU/Endpoint devices.

12. **Page 25, Section 5.6.13:**

a. **Are there multiple meters located in meter pits?**

Answer: Yes

b. **How many *vaults* are located in the City’s system?**

Answer: Approximately Less than 100 with confined space

c. **Do the *vaults* have pit lids or bilco type steel doors?**

Answer: Both

d. **What is the depth of a City residential meter pit, 5/8” – 2”?**

Answer: The depth from the meter pit bottom to the ground level is typically 36” to 42”. It is generally 14 to 24” from the top of the lid down to the center-line of the meter base.

13. **Page 50, Section 5.19.2:**

a. **What are the City work hours in case City assistance would be required?**

Answer: Typical field hours are 7 AM to 3 PM

b. **What is the City’s 2016 Holiday schedule?**

Answer: Standard holidays are observed (New Year, Independence Day, Christmas, New Years, etc.) plus the third Thursday in September

14. **Page 58: Other than the (3) three listed elevated storage tanks, what other type of City infrastructure is available to install data collection units (DCU) such as cell towers, municipal buildings (fire, police, offices, schools), street/traffic lights, playing field light poles, sewer pump stations, etc.? Please provide an ESRI shapefile or Excel file with street addresses for additional city infrastructure locations that are available for mounting a DCU.**

Answer: See table below:

Address	Building Name
1 S. Sandusky Street	City Hall
225 Cherry Street	Wastewater Plant
3080 US Rt. 23N	Water Plant
440 E. William Street	Public Works Facility
70 N. Union Street	Police Department

99 S. Liberty Street	Fire Station No. 1
683 Pittsburgh Drive	Fire Station No. 2
1320 St. Rt. 37W	Fire Station No. 3

15. **Is it to be assumed that any and all product to be installed “inside” will be shipped directly to the City and said inventory will be managed and controlled by the City?**

Answer: Yes

16. **Is it to be assumed that the installation contractor will not have to establish appointments for “outside” installations?**

Answer: The City doesn’t anticipate any appointments being required.

17. **Are residential meters 5/8” – 1” in meter setters?**

Answer: No.

18. **Does the City utilize expansion connectors? If so, is the City requiring replacement of currently installed expansion connectors?**

Answer: No.

19. **Should an upstream or downstream valve require replacement, does the City have any specific 5/8” – 1” valve requirements?**

Answer: Most of the City valve are a 90 degree shutoff valve. Typically not gate type valve. Broken valves shall be replaced in like kind.

20. **What is the process for turning installations back to the City for bad plumbing, difficult installation, no response from end user (water is always running), etc.?**

Answer: While the City expects nearly all installations can be completed it understands that a limited number of installations will not be feasible due to circumstances beyond the vendor’s control. For these situations, the City can provide a resource (Liaison) to approve the issue or require the installer to complete the job. The City requires a field Supervisor to first check the issue before escalating to the City Liaison.

21. **What is the disposition of all removed product. i.e. meters, registers, endpoints, pit lids, etc. City or contractor?**

Answer: The city will keep all scrap at a designated drop off location.

22. **Will the City supply and take care of a recycling area for product cardboard?**

Answer: Yes

23. **Will pre and post digital pictures be required?**

Answer: Yes, per section 5.18.1, the Proposer shall take and submit photos of the as-found meter register, as-left meter register and new MIU serial number for QC; these photos can be submitted on a disc or ftp site.

24. **Will the gathering of meter location lat/longs be required? If so, standard or submeter?**

Answer: No, the City did not list this as a requirement.

25. **Will the City assist with project notification to its customers by way of bill stuffers, newspapers, public access cable, and public service announcements on radio/television ads, etc.?**  
Answer: Yes.
26. **Are any state, county, municipal, and/or local fees, permits, and or licenses required for this project?**  
Answer: All state and local rules and regulations should be followed. This includes any fees, permits, and or licenses that may or may not be required as part of this project.
27. **What is the current condition of the City's meter pits? i.e. Are the meter pits all level at grade? Are the City's meter pits clean and free of debris or back filled with soil/sand/debris, flooded?**  
Answer: Approximately half of the pits fill with water; the vendor is expected to pump out any water. The vendor should expect some reasonable debris in the vaults however if extreme circumstances are found the City will support as needed.
28. **Where are the residential meter pits located? i.e. front yard, back yard, alleyways, etc. What percentage of each?**  
Answer: Generally, meter pits associated with residential meters are located in the front of the property, commonly known as the right-of-way. Commercial pit locations are more unique and could be located within the property or in the right-of-way. The City does not maintain a detailed list of meter pit locations.
29. **Are the City residential water meter pits well marked and easily locatable? If not, what type of assistance will the City provide in locating meter pits?**  
Answer: City field staff (Liaisons) will participate with install crews to help in locating meter pits. A majority of meter pits are expected to be easily identifiable.
30. **If data collection units (DCUs) are to be installed on street light poles with OWL's, is power to the street light continuous 24 hours a day? If so, what is the voltage of the voltage of the street light, 120VAC, 240VAC, etc.?**  
Answer: 120 VAC continuous
31. **Will the City provide an area to dispose of any soil/sand/debris found in meter pits?**  
Answer: Yes
32. **What is the City's current meter reading/route cycle; quarterly or monthly?**  
Answer: Bi-monthly.
33. **Will all meter change-outs be like-for-like in size, length, and type?**  
Answer: Yes.
34. **What is the lay length of the 5/8" and 3/4" meters?**  
Answer: 7 1/2" for the 5/8 x 3/4" and 9" for the 3/4".
35. **What is the current supply line material for residential meters; copper, galvanized, plastic, lead, etc.?**  
Answer: Copper, galvanize and plastic. Approximately 90% is copper.

**36. Are there any deduct meters co-located with water meters?**

Answer: Yes. Any meter associated with deduct will be installed by the City due to the deduct being located indoors

**37. Can the City supply an ESRI GIS Shapefile or Excel file with service addresses of all of the meter locations? Please include the meter installation year and installation type – pit or indoor.**

Answer: To be included as an attachment.

**38. Do the meters 2" and greater have bypasses?**

Answer: For the 2" meters, approximately ½ have bypasses. 3" and larger do have bypasses. Please keep in mind that larger meters (1 ½" and larger) will not be replaced by the proposer as part of this project.

**39. For meters that have to be changed out, 2" – 8"; are these disc, compound, or turbo meters? Please provide numbers and types to be changed-out in meter pits/vaults.**

Answer: No C&I meters will be changed out as part of this program. If the MIU cannot successfully talk with the register, then the job shall be returned to the City for a future upgrade.

**40. Do the meters 2" – 8" have existing strainers? If so, will strainers need to be replaced? If strainers are not currently installed, will the City be purchasing strainers for installation?**

Answer: No C&I meters will be changed out as part of this program. If the MIU cannot successfully talk with the register, then the job shall be returned to the City for a future upgrade.

**41. Are the meter valves on 2" – 8" meters in good working order?**

Answer: No C&I meters will be changed out as part of this program. If the MIU cannot successfully talk with the register, then the job shall be returned to the City for a future upgrade.

**42. Does the City of Delaware have an annual operating budget established for operating and maintaining an AMI system? If so, what is the budget?**

Answer: Yes, but that information will not be disclosed at this time.

**43. Pricing is requested throughout this RFP for various sections. Is it acceptable to state "Pricing will be included in a separate proposal?"**

Answer: Yes, pricing will be requested following interviews.

**44. How should the Lifecycle Cost in Table 2 be presented?**

Answer: Table 2 identifies all criteria that will be used to evaluate vendor proposals. However, lifecycle cost is not to be included at this stage. Price and related lifecycle cost will be requested and evaluated after Proposer interviews.

**45. The specifications say "..the City is interested in a hosted" AMI system. Is this to say the City will not consider easily operated, non-hosted systems that could ultimately save the City hundreds of thousands of dollars?**

Answer: Both hosted and non-hosted systems will be considered. But if the cost between the two is similar, a hosted solution is preferred due to limited staff resources and availability.

**46. The specifications provide detail (by size) of all the City meters, but only summary detail of those (outside) meters to be addressed by the Contractor. Can the City provide by-size detail of the 1,043 "Meter+MIU" settings and the 6,402 "MIU Only" settings?**

Answer: Please refer to Attachment B.

47. **Can we assume all the meters to be left in place are in Cubic Feet and have an electronic register reading resolution of 100 CF or greater?**

Answer: Yes

48. **The specifications repeatedly mention the requirement for very precise timing ("time stamps") that is reflective of information from a specific product supplier, not the industry as a whole. Can you please tell us why the 'time stamp' is so critical on meters that may not show a change in reading resolution but once every three or four days, maybe longer?**

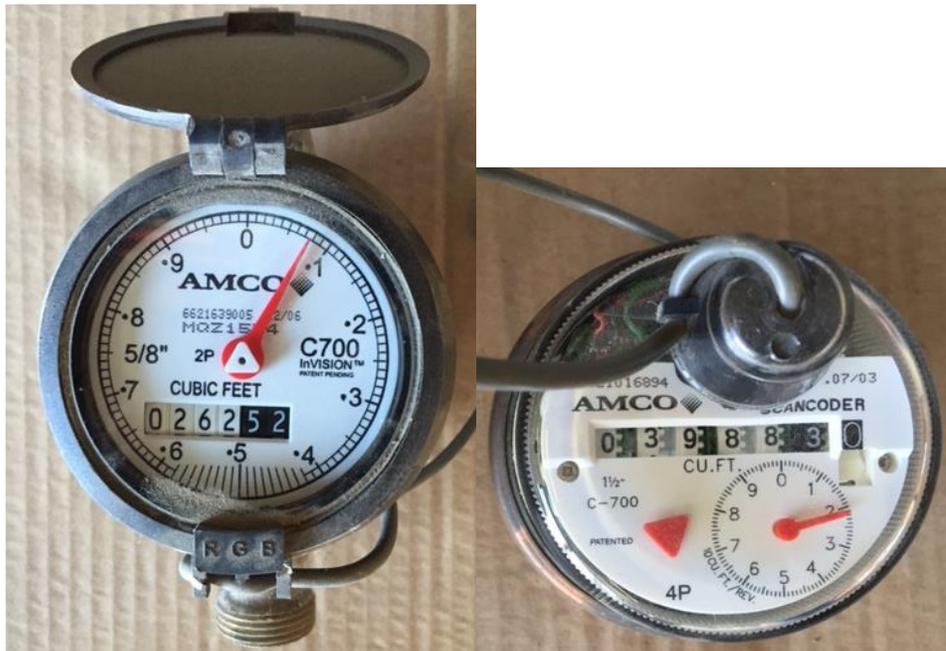
Answer: The City anticipates that the majority of meters will show daily changes in consumption. The time stamp feature is required in order to allow the City to perform a system water balance. Please indicate in your proposal how your solution can also achieve this functionality without time-synchronized reads.

49. **The specifications require the AMI system be able to read an import meter (Zenner) and a discontinued meter (Elster AMCO C700). Can we assume the City of Delaware wants the AMI device to read more than just these two meter types?**

Answer: Yes, however if the AMI device is incompatible, the City would entertain replacement of existing meters if it is cost justified.

50. **The now discontinued Elster AMCO C700 register came in both a synchronous and asynchronous programming type. One is compatible with the open, AMI protocol as most meter vendors provide, the other is not. Does the City know whether the register on the C700 meters can be read by an open protocol reading system?**

Answer: The open protocol is believed to be used. Please see below for a series of photos of typical meter registers:





51. **The specifications (section 5.5.5 and 5.5.6) go into detail of reading interval and product re-programmability. Does the City want MIU's that are restricted to only one or two manufactures, or one that can read nearly every water meter from every, major US water meter vendor with just site re-programming - if required?**

Answer: If the City was forced to choose, the compatibility with multiple manufactures would score higher than remote endpoint re-programing.

52. **Section 5.5.17 request the ability of the system to provide "leak detection". There is also a section per 'major' leak detection and 'no flow for 10 days' detection. Is the City aware that these features will only be available for those meter that have a register resolution of (at minimum) 1CF or better?**

Answer: The City is aware of the impacts of meter resolution.

53. **Section 5.5.20 indicates the City wants to use the AMI system to enforce water restriction regulations, if need be. This is a good feature when both the meter and the AMI system have the ability to read and report precise usage information on a timely (5-Minute interval) basis, certainly more than once or twice a day. Is the City prepared to have some water customers that could be subject to these restrictions, and others that are not?**

Answer: This is a question of enforcement rather than "subject to restriction." Please explain how your solution could be used to support the objectives of section 5.5.20.

54. **Will the City request the AMI vendors provide a list of references where the entire AMI system has been successfully operating for "twenty (20) years or more"?**

Answer: The City will not limit the proposers to only systems in place for twenty years or more. As stated in section 6.4, the proposers shall provide a list of three water utility references.

55. **Will the AMI vendor be permitted to use RF 'booster' boxes or devices to capture reads after system deployment and, if so, who will bear the expense of those devices?**

Answer: The vendor shall be permitted to propose any solution that meets the required network performance levels listed in section 5.5.24, including 'booster' boxes. All expenses associated with meeting those levels shall be included in the Cost Proposal portion of the procurement process.

**56. Does the City require actual copies of the written warranty for all components of the AMI system?**

Answer: The City does not require actual copies of warranty documentation for each AMI component. However, per section 2.1, warranty shall be a key evaluation criteria so proposers are encouraged to explain the extent of their warranty coverage.

**57. Will the City accept MIU devices that, if required to go into 'boost' mode, automatically waive their warranty protection?**

Answer: If 'boost' mode is required to meet the read performance levels then the warranty shall cover all MIU devices operating in such mode.

**58. Will the City require the MIU device provide instant connectivity confirmation on installation to verify proper operation?**

Answer: The City does not require each MIU to be 'heard' over the network at time of installation. However, as stated in section 5.19.5, the installation shall not be accepted until the system has successfully captured the scheduled readings for two consecutive days following completion of the installation. Also, per section 2.20.2, the City shall not pay for an installation until it is completed and accepted (5.19.5).

**59. There is not any detail on the existing meter settings. Are the (outside) 5/8" - 1" meters in yokes or straight couplings? Also, are the 1 1/2" or 2" meters (to be changed) flanged or threaded? Lastly, what is the City preference on the to-be-replaced (outside) meters that are 3" and larger? Are any settings to be right-size evaluated, tested, or fire service type?**

Answer: The City will not be right-sizing, testing, or modifying fire service type at this time. All 5/8 and 3/4" and 1" are on a meter swivel fittings. Anything larger are generally the oval flange.

**60. Are there any specifications for the 1,043 new meters to be provided? Type, units, register resolution?**

Answer: See Attachment B. Proposer shall recommend meter type, resolution, etc. that meet the functional requirements, intent, and objectives of this RFP.

**61. While understanding the Technical Proposal is to be submitted in advance of both the Vendor Presentations and the Cost Proposal, the "Evaluation Criteria" listed pages 2 and 3, end with "Lifecycle Cost". Can we assume this figure is NOT to be with the Technical Proposal, but submitted with the Cost Proposal?**

Answer: Yes

**62. Whereby the City strongly indicates (a) the desire for a hosted system, and (b) a 20-year, Lifecycle cost, will the final "costs" evaluation be on just the immediate work to set up the system, or the immediate work and the true 20-year projected costs of the proposed AMI system, inclusive of all 'hosting'?**

Answer: The cost evaluation will include a lifecycle cost analysis (LCCA). This means the initial capital investment PLUS the ongoing O&M requirements over the 20 year life, will be discounted to today's dollars, using a Net Present Value (NPV) based on the City's Weighted Average Cost of Capital (WACC).

**63. Will the City permit perspective proposers to make a site visit to evaluate existing conditions between now and the date the Technical Proposal(s) are due?**

Answer: Yes. Please contact Mr. Stanton to arrange a site visit.

**64. The level of work certainly exceeds minimum thresholds for prevailing wage activity along with requirement for certified payrolls. Will an addendum be issued that provides the prevailing wage determination for this Project?**

Answer: See question 2.

**65. On the RFP documents it states that 7,445 meters are located outside, can you verify that these are pit sets or remote mounted? Which addresses of the 12,085 would these fall under? In regards to the 4,640 inside sets are these scheduled to be moved to the outside (pit or remote?) and if not are these in basements or rafters?**

Answer: See attachment for location details of remote vs. pit mounted for all meters. Indoor meters are scheduled to slowly be moved to the outside pit over time by City staff.

**66. I did not see tables F1-F3 attached with the original RFP, are these available?**

Answer: The pricing tables (including tables F1-F3) will be included in the Cost Proposal component and will be distributed at a later time.