

**UCF Campus Infrastructure & Utility Production Facility  
Continuing Contract  
Utility Metering  
Project Fact Sheet**

**PROJECT DESCRIPTION**

The University of Central Florida announces services are required of qualified contractors to perform utility revenue grade metering installation, replacement, repair, testing and reporting services under \$4,000,000 in construction costs.

The initial term of the agreement will be one (1) year, with the option to extend the agreement for four (4) additional one-year terms, upon satisfactory performance, for a total of five (5) years. All firms applying must be licensed as Contractors in the State of Florida by the Florida Department of Business and Professional Regulation at the time of application and, if a Corporation, registered to operate in the State of Florida by the Department of State, Division of Corporations. The selected firms' minimum bonding capacity shall be \$4,000,000.

A not-to-exceed percentage fee for overhead and profit will be established in the agreement. This fee will be effective for the life of the contract. When an individual Project arises, the Contractor will be provided a detailed description of the Project scope (plans and specifications when applicable) and asked to provide to the designated UCF Project Manager a cost proposal for completing the work. The cost of the work will include all costs related to completing the work plus the agreed upon percentage fee for overhead and profit. The Contractor will be required to seek competitive bids for all subcontracted work with a value over \$5,000 which will be included as part of the cost. Upon approval of the cost, the UCF Project Manager will submit a requisition to the University Purchasing Division, which, in turn, will issue a Purchase Order to the Contractor for the work.

Specific information can be found in "*Attachment A.*" Commodities that are metered on UCF's campuses include, residential, commercial, and industrial services such as electric, water, wastewater, chilled water, and natural gas.

**NOTE:** The Selection Committee may reject all proposals and stop the selection process at any time. The University also reserves the right to cancel the project at any time.

**INSTRUCTIONS:**

Carefully review the Contract posted with this advertisement at <https://www.fp.ucf.edu/resources/contract-documents/>. Submitting a proposal for this project constitutes complete agreement with, and acceptance of, the terms and conditions contained within these documents. **NO changes will be accepted.**

Contractors desiring to apply shall submit **only electronic submissions**, to be uploaded at: <https://ucf.bonfirehub.com/opportunities/201133>, comprising:

- A. a letter of interest;

- B. a copy of the Contractor firm's current license from the appropriate governing board. All applicants must be licensed and insured to practice as General Contractors in the State of Florida at the time of application. Corporations must be registered to operate in the State of Florida by the Department of State, Division of Corporations, at the time of application.
- C. a completed Contractor Form;
- D. a list of completed jobs over the last year, with contract value, contact name, and telephone number
- E. narratives to address items listed in the Selection Criteria, as shown below

Please note that only ONE (1) file can be uploaded for the entire project submission.

Pages must be numbered consecutively. Proposals must not exceed 30 (excludes cover page and tabs). Points may be deducted for proposals exceeding the 30-page limit.

Detailed submissions instructions can be downloaded from the link shown above.

Applications that do not comply with all instructions may be disqualified.

Application materials will not be returned.

No oral communications shall be binding as a change to the Advertisement or Project Fact Sheet. Interpretation of the wording of this Project Fact Sheet shall be solely that of UCF and that interpretation shall be final. UCF may respond to questions deemed by the University to be material in nature.

It shall remain the responsibility of the firms participating in this solicitation to check the Planning, Design and Construction website (<https://www.fp.ucf.edu/vendors/current-advertisements/>) regarding any addendums and Notice of Change.

As required by University of Central Florida Regulation 7.102.22, a contractor may not submit a proposal for this project if it is on the convicted vendor list for a public entity crime committed within the past thirty-six (36) months. The selected contractor must warrant that it will neither utilize the services of, nor contract with, any supplier, subcontractor, or contractor in excess of \$15,000.00 in connection with this project for a period of thirty-six (36) months from the date of their being placed on the convicted vendor list.

## **SELECTION CRITERIA**

Companies will be evaluated on the following:

1. **Past Performance.** Provide information on five (5) projects, including those on college campuses, that are similar in size, complexity, and scope to what may be performed hereunder. Projects that are submitted that are not relevant in project type, size, and scope will receive no points. Clearly articulate within each of the 5 projects information regarding:

- a) similarity in project type, size, and scope;
- b) initially scheduled completion dates and actual completion dates;
- c) original construction cost at time of GMP/Bid (the exact amount per the contractor's contract) and final construction cost at time of project completion (the exact amount per the final payment application; including additive change orders and including owner direct purchases); provide an explanation for any discrepancies including any error/omissions;
- d) names and roles of proposed team members who actively worked on each past performance project; and
- e) owner's contact information (name, title, phone, email)

**2. Ability to Take on Additional Work.**

- a) Reflect your current workload and staffing.
- b) Describe how UCF's workload will be fulfilled.

**4. Experience and Ability.** Describe your firm's experience and ability:

- a) working with public, higher education clients and their Standards and processes;
- b) with cost estimating and change order avoidance;
- c) with cost control, including methods employed;
- d) managing and performing numerous projects at the same time;
- e) work in a High-Energy System Environment (PPE, training, onsite supervision), which includes, Voltages, Lubricants, Air and Water. Provide a narrative to address this ability.

**5. Bonding Capacity.** Provide a letter from your bonding company reflecting your current bonding capacity and rating.

**6. Personnel.** Provide bios for each of your firm's management, supervisors, line employees, and any other personnel that you believe are critical to the success of the work to be performed hereunder.

- a) Line Employee / Crew Member
- b) Supervisor / Project Manager
- c) Field Engineer / Specialty Technician

**7. References.** Provide three (3) letters of reference and recommendation prepared by your firm's client(s) for each specialty trade you are applying for hereunder. References may not be from UCF personnel.

**8. Location.** Provide the address of your main office and any regional/local offices you have. Provide details of what services and personnel you have at each

location. Indicate which office(s) the personnel leading this project will be operating from.

9. **Safety and Security.** Describe your policies, planning, and practices related to safety and security. **Note:** Criminal background checks and E-verification must be provided for all employees and sub-contractors. Proper PPE and Picture ID cards will be worn at all times workers are on the job.
10. **Quality Assurance/Quality Control.** Work shall be completed in accordance with the latest ANSI standards, original equipment manufacturer (OEM), and applicable codes, in addition to the University's standards. Describe your firm's approach to QA/QC and commissioning.

#### **GENERAL INFORMATION**

1. All applicants will be notified of the results of the short listing in writing. Finalists will be informed of the interview dates and times and will be provided with additional project information, if available.
2. The Selection Committee will make a recommendation to the university president. All finalists will be notified in writing of the president's action.
3. Selection Committee Team Members have elected to not meet with firms prior to interviews

## Attachment “A”

**Specialty Trade:** Revenue Grade Meter Accuracy Installation, Replacement, Repair, Testing, and Reporting Services

### **ELECTRIC METERING:**

#### **Testing and Reporting consisting of:**

Qualified vendors to perform **in-service accuracy testing** of utility-grade electric meters across campus. Testing will include self-contained meters, CT-rated meters, and CT/PT-rated meters serving voltages from **120V through 480V**, as well as **4160V services for industrial chiller plants**.

Testing shall be performed in accordance with applicable **ANSI C12 standards** (including C12.1 and C12.20) to ensure compliance with accepted utility practices and accuracy requirements.

#### **Meter Types to be Tested**

- **Self-Contained Meters:** 120V – 480V, Socket Type, up to 400A
- **CT-Rated Meters:** 120V – 480V, Socket Type, typically > 200A service, requiring external current transformers.
- **CT/PT-Rated Meters:** 4160V, Socket Type, requiring external current transformers. (primarily industrial chiller plants, utilizing potential transformers in starters and chiller equipment in addition to CTs).

#### **Data Collection and Reporting Requirements**

Vendors shall provide a **comprehensive test record** for each meter, including a **summary page** indicating whether the meter favors the **utility** or the **customer**, based on accuracy % thresholds provided by the University.

#### Test Record Summary Page must include:

- Current and Voltage Phase Angle Diagrams (Vectors).
- Meter ID / Serial Number
- Location / Service Address
- Test Results by Load Point (Light, Nominal, Full)
- Current and Voltage Phase Angle Diagrams (Vectors).
- Current and Voltage by Phase.
- Validation of Correct/Incorrect Polarity
- Wire Installation / Setup Verification
  - Form Type/Class/Wire/Service designations
- Harmonic Detail (THD Voltage/Current % by phase).
- Power by Phase and System.
- kVA, kVAR, PF values measured/reported.
- Accuracy Testing Results of Potential/Voltage Transformers
- Accuracy Testing Results of Current Transformers:

- CT Ratio / Burden Summary (from 0 to max rated burden).
- Accuracy Testing Results of Electric Meter (all forms)
- Summarized % Accuracy (favoring Customer vs Utility).

#### Qualifications and Deliverables

- Vendor must demonstrate prior experience in **utility-grade in-service meter testing** at both low- and medium-voltage levels (120V through 4160V).
- Testing must be performed by **qualified personnel** with verifiable training in ANSI C12 test standards.
- Deliverables must include:
  - **Individual test reports** for each meter.
  - **Consolidated summary report** outlining all test results, meter pass/fail status, and recommendations.
  - Highlighting of meters requiring **replacement, recalibration, or further investigation.**
  - Technician name, credentials, date of testing.

#### Work Conditions & Safety Requirements

- All testing will be performed on **energized services** with direct access to meter enclosures and test switches.
- All **self-contained meters** are equipped with bypass capability.
- Installations vary, including:
  - **Indoor / Outdoor meters** with CTs located inside main distribution panels (MDPs) on the line side of breakers, sometimes up to **50 feet away**.
  - **Outdoor meters within 10-20'ft of CT Cabinet/CT installation**
  - **Outdoor meters installations** connected to Utility Provider pad mount transformer installed CT's (Duke Energy).
  - **Industrial Panel or SUSI Adapter Socket** mounted meters in Chiller Plant 4160V starters/switchgear.
- Vendors must account for these conditions in their testing procedures.
- All work must comply with **UCF safety standards** and industry best practices for energized electrical work.
- Contractors are responsible for providing and enforcing use of **appropriate PPE and ARC Flash-rated gear** in accordance with **NFPA 70E** and OSHA requirements.
- Proper **lockout/tagout (LOTO) coordination** with UCF utilities staff is required when isolation is necessary and must be coordinated with plant operators at all industrial plants beforehand.
- Contractors must ensure safe work zones, barriers, and clear communication with UCF staff during testing activities.
- No work may be performed that compromises system reliability, customer safety, or compliance with state and federal electrical safety regulations.

## **NATURAL GAS METERS**

### **Testing and Reporting consisting of:**

- Small and Small Commercial Diaphragm Meters (1000 and under)
  - “As Found” and “As Left” accuracy proof test results demonstrating Open/Check/Error % Results for each meter removed and before every meter installed.
  - Test reporting to include all index readings, notes, dates, test staff, Meter ID, Model, Serial Number, Manufacturer.
- Commercial/Industrial Rotary & Ultrasonic Metering (typical 1M – 11M):
  - On-Site portable proof testing capability
  - On-Site Validation/Testing of Corrector and Flowmeter Body along with input sensors.
  - Coordinate/shutdown/bypass/test any meters in place providing all necessary tools, parts, and labor to complete the work.
  - Test reporting to include all index readings, notes, dates, test staff, Meter ID, Model, Serial Number, and Manufacturer.
- Equipment Testing:
  - Troubleshooting/testing/programming of Telemetry Equipment, Radio's, Correctors, Sensors (P/T), Wiring and Input/output signals for solar, battery powered, or hard-wired power connections.

### **Work Conditions & Safety Requirements**

- Where possible, all efforts will be taken to test meters in-service utilizing a bypass structure. Where no bypass is present, the service will require coordination between UCF and the vendor to schedule a service interruption to remove the meter for testing.
- All meters removed from service, and replaced with a a new meter, will have the removed meter either shop or field tested, out of service, and the results provided to UCF Metering team.
- All work must comply with 49 CFR Part 192, OSHA 29 CFR 1910/1926, and applicable Florida PSC gas safety codes.
- Use of PPE at all times: flame-resistant clothing (FR), hard hat, safety glasses, gloves, hearing protection, and steel-toe boots.
- Must have access to calibrated gas detection equipment for leak monitoring during work.
- Proper barricades, signage, and traffic control measures must be used when working near pedestrian or vehicle areas.
- Emergency response plan must be in place, with technicians trained in immediate gas shutoff and incident response.
- Compliance with lockout/tagout procedures when applicable.
- Service Record documentation of all work performed, including test results, safety checks, and meter set condition reports are to be provided at completion of work.

### Technician Qualifications

- Must be Operator Qualified (OQ) under 49 CFR Part 192 (Pipeline Safety Regulations) for all covered tasks associated with meter set maintenance and testing.
- OQ certification must be current and verifiable through a recognized program (e.g., NCCER, MEA, Veriforce, or other DOT-accepted providers).
- Documented training and demonstrated proficiency in:
  - Natural gas meter set operation and testing procedures.
  - Installation, maintenance, and inspection of bypass meters and valves.
  - Leak detection, pressure testing, and line integrity verification.
- Minimum of 3 years of experience in natural gas utility field operations.
- Knowledge of and compliance with Florida Public Service Commission (PSC) and DOT PHMSA gas safety requirements.
- Valid driver's license and ability to comply with site-specific access/security requirements.

### **CHILLED WATER METERING:**

#### Testing and Reporting consisting of:

- Components requiring testing and installation/setup validation for each chilled water metering system:
  - BTU Meter (Display)
  - Flowmeter
  - Supply Temperature Sensor
  - Return Temperature Sensor
  - Chilled Water System Accuracy (ton-hr/tons)
- Inspect and verify BTU Meter programming and configuration to site conditions and connected sensors, including verification of site conditions against calibration sheets for each system/component.
  - Calibration sheet matches paired flowmeter
  - Flowmeter settings validated for each installation
  - Diagnostics reviewed/checked
  - Tags are correctly identified and match piping
  - System configured for pipe installed
- For insertion style flowmeters, provide confirmation of proper insertion depth and directional/angled alignment of insertion flowmeters to chilled water piping.
- Flow Rate and Flow Consumption Testing against Chilled Water Insertion and In-Line flowmeters utilizing a secondary portable clamp on ultrasonic flowmeter (or portable insertion meter where applicable).
- Perform calculated vs displayed flow rate confirmation utilizing frequency output (if available)
- Verification/Thermowell Probe Testing against existing Supply/Return temperature sensors



- Verify and validate physical installation and setup of piping, pipe schedule, calibration parameters from manufacturer, and BTU meter configuration of chilled water system.
- Complete documentation of all components and reporting validating components are measuring and displayed properly as tested with accuracy results and recommendations.

#### Data Collection & Reporting

- Record and report the following for each meter:
  - Meter serial number, location, size, manufacturer, and register reading.
  - Flow test results (low, normal, high) with percentage accuracy.
  - Pass/fail determination.
  - Test equipment serial number, calibration date, and associated transducer or accessories models included in test (ex: Transducer model No.402)
  - Report must show the settings tested for each meter such as pipe material, outside diameter, pipe thickness, and transducer spacing.
  - Report must show the results, side by side, between the target meter and the test meter results, including the start read, end read, multiplier, total gallons and date tested along with a pass/fail % accuracy result.
  - Reported results must show the pass/fail % accuracy for all components as well as the overall metering system accuracy for energy consumption. Results must be tested and reported for each meter system:
    - Flowmeter accuracy
    - Supply Temperature Sensor Accuracy
    - Return Temperature Sensor Accuracy
    - Chilled Water System Accuracy (ton-hr/tons)
  - Report must include images of the entire meter installation with the test equipment installed.
- Reports must be provided in Excel document or other approved form type by UES Management.
- Test results shall indicate whether meters meet the specified accuracy tolerance defined by UCF (e.g.,  $\pm 2\%$  or 3% as indicated)
- Provide a final summary report analyzing overall meter performance trends and recommendations for failures.
- Reports must be delivered to the utility within 14 days of test completion for continued testing of more than 30 meters, and 7 days for any lesser quantities tested.

## **WATER (POTABLE AND RECLAIM)/WASTEWATER METERING:**

### **Testing and Reporting consisting of:**

- Testing to be conducted at multiple flow rates (low, normal, and high).
- Accuracy standards: must comply with AWWA M6 or current AWWA standards.
- Identification and documentation of meters that fail testing for potential removal/replacement. Report recommendation for replacement types and physical piping requirement changes expected to ensure accuracy.
- Contractor shall furnish all necessary testing equipment.
- Equipment must be calibrated and certified within the past 12 months.
- Testing methods must comply with AWWA M6 and industry best practices.
- Compliance with all applicable laws, regulations, and safety requirements.
- Proposal must include pricing structure (per meter)
- All meters must be tested “in-service” other than hydrant meters which are expected to be flow-tested onsite with existing connections, portable flow testing system, or brought back to meter shop for testing.

### **Contractor Qualifications**

- Demonstrated experience with water meter field testing of similar size/scope.
- Proof of calibration certification for all test equipment (NIST-traceable).
- Trained personnel with applicable licenses/certifications.
- Record of compliance with OSHA and local safety regulations.

### **Data Collection & Reporting**

- Record and report the following for each meter:
  - Meter serial number, location, size, manufacturer, and register reading.
  - Flow test results (low, normal, high) with percentage accuracy.
  - Pass/fail determination.
  - Test equipment serial number, calibration date, and associated transducer or accessories models included in test (ex: Transducer model No.402)
  - Report must show the settings tested for each meter such as pipe material, outside diameter, pipe thickness, and transducer spacing.
  - Report must show the results, side by side, between the target meter and the test meter results, including the start read, end read, multiplier, total gallons and date tested along with a pass/fail % accuracy result.
  - Report must include images of the entire meter set with the test equipment installed.
- Reports must be provided in Excel document or other approved form type by UES Management.
- Test results shall indicate whether meters meet the specified accuracy tolerance defined by UCF (e.g.,  $\pm 2\%$  or  $3\%$  as indicated)
- Provide a final summary report analyzing overall meter performance trends and recommendations for failures.

- Report must highlight meters requiring **replacement, recalibration, or further investigation.**
- Reports must be delivered to the utility within 14 days of test completion for continued testing of more than 30 meters, and 7 days for any lesser quantities tested.
- Individual meter test reports and associated images, named to match the meter ID for the meter tested.
- Final project report including summary of results, recommendations, and certification of testing. Identifying % of pass/fails by meter type and line size.

**NOTE:** All test equipment must be maintained and provided by the contractor. All calibration paperwork for test equipment must be provided to UCF before utilized onsite.