REQUEST FOR EXPRESSIONS OF INTEREST (EOI) 11120
Open-End Contract for Commissioning Services
January 11, 2011

The West Virginia Higher Education Policy Commission and the Council for Community and Technical College Education, collectively referred to hereinafter as “Owner” are soliciting EOIs from firms for Heating, Ventilation, Air Conditioning (HVAC) commissioning services for various LEED Certified and Non-LEED Certified higher education capital projects. This is an open-end contract and will be awarded to multiple qualified firms. In addition to the Owner, the institutions under their respective jurisdictions may use this contract.

Section 1. GENERAL PROJECT INFORMATION

1.1 The Owner has embarked on a major capital improvement program at the four-year and two-year colleges and universities and requires HVAC commissioning services for these projects.

1.2 The Owner is committed to commissioning the new facility to ensure that systems are complete and functioning properly prior to substantial completion and that the facility staff has adequate system documentation and training.

1.3 Each project has an Architect and an HVAC engineering consultant who will design the project, prepare construction and bidding documents and provide construction administration services. The Commissioning Engineer (CE) in most cases is expected to be an integral part of this design and construction administration team.

1.4 The projects are expected to be designed and constructed to a level of quality and energy efficiency that reflects the long-term use of higher education facilities, while adhering to the Owner’s budget and schedule. The Owner will authorize the Architect to design and build some projects as LEED Certified Projects and others will not seek LEED Certification. However, the Non-LEED Certified Projects are expected to adhere to LEED design principals.

Section 2. COMMISSIONING ENGINEER’S (CE) TASKS

2.1 The CE shall oversee and coordinate the functions of equipment startup, system performance testing and balancing, control system calibration, construction and system documentation, and training. Specific requirements of the commissioning process and responsibilities, duties, and obligations of the CE are described below. To accomplish these tasks, the CE shall be required to coordinate his or her activities with other entities. The commissioning process does not take away from or reduce the responsibility of the Architect or its HVAC engineering consultant or installing contractor to provide a finished and properly functioning HVAC system. The primary role of the CE shall be to develop and coordinate the execution of a commissioning plan; observe and document the installation, checkout, start-up, and equipment and system testing to establish that equipment and systems are functioning in accordance within the requirements of the Contract Documents; and to assist the Owner, in developing correct and complete documentation of the construction effort.

2.2 The CE will not be responsible for design concept, design criteria, compliance with codes, or the contractor’s means and methods of construction; however the CE shall advise and keep the Owner informed of any problems or issues conflicting with proper design principals, code compliance or construction means or methods which would cause the HVAC system to not function in an efficient and satisfactory manner.
2.3 The CE may assist the Architect and Owner with design issues, problem solving, and the correction of construction non-conformance or deficiencies, but ultimate responsibility for meeting the project objectives and requirements resides with the Architect.

2.4 The specific systems that shall be commissioned include but are not limited to the following and shall depend on the HVAC design requirements:

- Domestic Water Booster Pumps
- Hot Water Heating Systems
- Chemical Water Treatment Systems
- Chillers
- Cooling Towers
- Condenser Water System
- Air Terminal Unit Systems, VAV, PIU, etc.
- Humidifiers
- Duct Silencers
- Dampers
- Variable Frequency Drives & Motors
- Air Distribution Systems
- Exhaust Air Systems
- Trend Logs
- Service switchgear
- Emergency Power System
- Generators
- Lighting Controls
- Daylight Dimming Controls
- Motor Control Centers
- Power Monitoring and Metering
- Transient Voltage Surge Suppressors
- Variable frequency and Speed Drives
- Grounding and Ground Fault Systems
- Over Current Protective Devices
- Low Voltage Bussway
- Service Switchgear
- Emergency Power System
- Paging system and security
- ATS auto transfer switches
- Buss duct and tap devices

2.5 The CE may be brought into the project at various stages of design or construction. However, in general and depending on when the CE is engaged, the CE shall assist in documenting the project’s requirements, the design intent, and the design team’s basis of design and rationale for accomplishing these requirement as follows:

- Review Owner’s project requirements for completeness and clarity.
- Participate with Owner in including commissioning activities in initial project schedule.
- Refine Owner’s Project Requirements based upon design stage decisions.
- Prepare and distribute the initial commissioning plan.
- Attend initial meetings with and design team to discuss role of CE and coordination of design.
- Provide design team members with commissioning items to be considered during design.
- Perform a focused design review at the end of design development, which shall include the following: (a) input regarding making the building easier to commission; (b) how building
O&M can be made easier [accessibility and system control, etc.]; and (c) how utility usage and indoor environmental quality can be improved.

- Prepare commissioning specifications for the construction bid documents for all systems and equipment that are to be commissioned.
- Have the commissioning specifications approved by the Owner and design team and included in the construction specifications.
- Prepare draft functional tests for equipment and systems to include in specifications.
- Submit test procedures to the Owner and Architect for review and comments.
- Attend design team review meetings as required to discuss comments on plans and coordinate specifications.
- Review bids and contractor pricing regarding commissioning activities and submit evaluations to the Owner.
- The Architect will provide adequate written OPR, Basis of Design, and full sequences of operations, complete with points lists and control schematics for all equipment and systems for inclusion in the O&M manuals and for the CE to use in writing functional tests.

2.6 Commissioning during the construction phase is intended to assure the Owner that the project requirements, as defined by the contract documents, are met and to achieve the following specific objectives. The CE shall complete, at a minimum, the following tasks during the construction phase:

- Conduct and lead a partnering meeting with the contractor and appropriate subcontractors to discuss commissioning scope, plan, and schedule.
- Revise commissioning plan as necessary.
- Coordinate the commissioning work with the contractor and subcontractors; ensure that commissioning activities are being scheduled into the construction schedule.
- Continue to update schedule and coordination throughout construction with contractor and subcontractors.
- Submit the final commissioning plan to the Owner, Architect and Contractor.
- Review and advise on Contractor's submittals applicable to systems being commissioned for compliance with commissioning needs and forward comments to the Owner and Architect.
- Review RFIs and changes for impacts on commissioning plan.
- The CE shall provide a review of the contractor submittals to help identify any issues that might otherwise result in re-work and/or change orders.
- Ensure that O&M material is submitted according to the requirements of the Project Manual. This material will be needed to assist in finalizing start-up and testing procedures.
- Prepare final pre-functional and final functional test procedures for the equipment and systems.
- Submit test procedures to Contractor, with copies to the Owner and Architect, for comments on appropriate startup, operations, and systems safety. Testing should include each sequence in the sequence of operations under central and packaged equipment control; including startup, shutdown, capacity modulation, emergency and failure modes, alarms and interlocks to other equipment.
- Coordinate with the Contractor to witness startup of major equipment.
- Review and approve TAB execution plan.
- Perform site inspections during rough-in of systems and equipment.
- Maintain commissioning deficiency log of any items found to be a problem, poorly installed, or discrepancies.
- Attend on-site meetings for review of progress, coordination, and issues resolution.
- Participate in MEP/FP coordination discussions with Contractor and subcontractors. This may be done via conference call.
- Witness a sample of pipe test and flushing procedure, sufficient to be confident that proper procedures were followed.
• Witness a sample of any ductwork testing and cleaning procedures, sufficient to be confident that proper procedures were followed.
• Witness a sample of checkout, TAB, end-to-end testing, and calibration of controls.
• Witness a sample of data network installation, plus end-to-end checkout and testing.
• Observe first pre-functional test of each type of system, including mechanical, controls, electrical, and specialty systems.
• Prepare progress reports and submit them to the Owner and Architect.
• Hold construction phase commissioning meetings in conjunction with construction progress meetings.

2.7 Commissioning during the acceptance phase is intended to demonstrate the performance of the equipment and that systems installed during the construction phase meet the requirements of the Contract Documents. The CE shall complete the following tasks during the acceptance phase:

• Continue to update the schedule and coordination throughout construction with the Contractor and subcontractors.
• Coordinate and supervise commissioning deficiency corrections.
• Maintain Record of functional testing.
• Obtain pre-functional reports from the Contractor with sign-offs that the systems have been checked out.
• Verify the installation performance of commissioned systems.
• Oversee TAB, to include verification and witnessing of final TAB of all equipment, heat exchangers, air terminals, diffusers, grilles, hoods, terminal devices, and equipment testing, and document findings.
• Witness performance testing of smoke control systems. Testing should include each sequence in the sequence of operations under central and packaged equipment control; including startup, shutdown, capacity modulation, emergency and failure modes, alarms and interlocks to other equipment.
• Witness functional testing of each major piece of equipment to demonstrate that each item of equipment and system is operating according to the Design Intent and contract documents. Functional testing shall include operating the system and components through each of the written sequences of operation. Test on respective HVAC equipment shall be executed during both heating and cooling seasons.
• Provide troubleshooting to assist in resolving control problems, as they are uncovered. Functional testing shall be performed on all control points.
• Check the system graphics to assure all graphics are developed. Check a 10% sample of point’s mapped graphics to assure they are correct.
• Test 10% of copper data/voice cables, and 100% of fiber data cables.
• Keep a detailed log of testing for each piece of equipment.
• Maintain a deficiency log of any items found to be a problem, poorly installed, or discrepancies. Provide the log and test results to the Owner, Contractor, Architect and the Architect’s HVAC consultant with recommended actions.
• Coordinate retesting as necessary. One retest will be provided as part of normal checkout. More than one retest will be considered work outside the normal scope of work.
• Notify the Owner, Architect and Contractor of the unacceptable findings if 10% of identical pieces of equipment fail to perform to the requirements of the contract documents because of manufacturing defects which do not allow it to meet the submitted performance specification, request an explanation of the problem and the Contractor’s proposed solution(s), and then review and advise the Owner and Architect on the proposed solution(s).
• Attend weekly meetings while on-site for functional testing.
• Attend on-site meetings for review of progress, coordination, and issues resolution.
• Review O&M documentation for completeness. This review shall be in parallel with the Design
Professional team’s review of the O&M documentation for conformance to the project
specification.
• Provide the institution’s staff with systems training on “how the building is supposed to
operate.”
• Review, pre-approve, coordinate and or conduct training as necessary of the operating
personnel by the Contractor.
• Review equipment warranties to ensure Owner responsibilities are clearly defined.
• Perform seasonal testing checkout of equipment at maximum cooling and maximum heating.
• Prepare the Commissioning Final Report. The report shall include an executive summary, list
of participants and roles, brief building description, and the following sections:
  a. Owner’s Project Requirements
  b. Basis of design
  c. Pre-functional checklists complete
  d. Functional checklists complete
  e. TAB reports
  f. System schematics
  g. Control strategies and set points
  h. Deficiency Log
  i. Guidelines for energy accounting
• Review equipment warranties to ensure Owner responsibilities are clearly defined.
• Verify that the requirements for training are completed.
• Coordinate and supervise deferred and seasonal testing and balancing.
• Review building operation within 11 months after substantial completion.
• Address concerns with operating facility as intended.
• Conduct Lessons Learned Workshop.

2.8 Commissioning during the warranty period is intended to assist the facility operating staff in
identifying any defects in the installed equipment or system operation. The CE shall complete the
following tasks during the warranty phase:

• Return to the site and review with facility staff the current building operation and the
condition of outstanding issues related to the original and seasonal commissioning.
• Interview facility staff and identify problems or concerns they have with operating the
building as originally intended.
• Identify deficiencies that may come under warranty or under the original construction
contract.
• Prepare a detailed evaluation after eleven months on the status of warranty issues for the
facility staff and Owner.
• Attend on-site meetings to discuss warranty issues.

2.9 The installing subcontractors shall provide all tools or the use of tools required to start, checkout,
and functionally test equipment and systems, except for specified testing with supplemental
portable data loggers, which shall be supplied and installed by the CE. To expedite air-water
balance testing, and to minimize additional cost to the Contractor, the CE will verify the TAB
contractor’s air-water balance values by witnessing the testing and verifying the results while on
site. Data logging equipment, monitoring devices, specialized equipment, and software not
required to be provided by the installing subcontractor in the Contract Documents, and provided
by the CA to monitor, confirm, or verify the contractor’s testing procedures, shall remain the
property of the CE. Equipment provided shall meet the minimum accuracy, calibration, and
performance standards required by the performance test.
2.9 The documentation (reports) submitted to the Owner shall be in electronic form and paper form. Documentation refers to all correspondence (letters, memos, observations, etc.), all test reports and all Test and Balance Reports.

2.10 The actual scope of services could vary from the task listed above and communicated to the selected CE for a project.

Section 3. SELECTION PROCESS

3.1 Selection of CEs will be qualifications-based. Multiple qualified CEs will be selected for an open-end contract. Expressions of interest will be received and evaluated using the following criteria:

- **15% Factor (Max):** Location of Firm. Location of firm and its perceived ability to provide project commissioning services in an economical, effective and efficient manner to projects in particular regions of West Virginia, i.e., the northern panhandle, eastern panhandle, central West Virginia, etc.

- **40% Factor (Max):** Suitability. Firm's relevant project experience and suitability in effective commissioning of major LEED and Non-LEED higher education facilities. This includes relevant experience and qualifications of managing principals in commissioning of mechanical and electrical systems. Firms should identify any special or unique qualifications, i.e., particular experience in commissioning of laboratory and research facilities, etc.

- **45% Factor (Max):** Experience and Qualifications. Commissioning professionals' relevant project experience and suitability in effective commissioning of major LEED and Non-LEED higher education facilities, including any special or unique qualifications, i.e., particular experience in commissioning a particular type of facility

3.2 Firms under final consideration may or may be interviewed before a final decision is made.

Section 4. Submitting Expressions of Interest (EOI)

4.1 Submit an original EOI, plus one complete copy on a CD. The original Expression of Interest should be bound in a three-ring, loose-leaf binder and be suitable for copying. It should not exceed fifty pages.

4.2 Faxed and emailed EOIs will not be accepted. All documents/information submitted in response to this solicitation will be considered public information after an award is made and will be subject to the West Virginia Freedom of Information Act.

4.3 The Owner will not be responsible for expenses incurred in the preparation and/or presentation of Expressions of Interest, for any oral interview, or for the disclosure of any material or information received in connection with this request for EOIs.

4.4 Written questions concerning the EOI will be received until 5:00 PM, Eastern Time, January 18, 2011, at the mailing address, fax number or email address below.

Chief Procurement Officer  
West Virginia Higher Education Policy Commission  
1018 Kanawha Boulevard, East, Suite 700  
Charleston, WV 25301  
Phone: (304) 558-0277  
Fax: (304)558-0259  
donovan@hepc.wvnet.edu
4.5 Questions will be answered by addendum posted on the following webpage by January 19, 2011. It is the CE’s responsibility to check the webpage for current information regarding this EOI at the following URL: https://wvhepc.org/purchasing/

4.6 EOI’s must be submitted in a sealed envelope or package. EOI’s will be received until 3:00 PM, Eastern Time, January 26, 2011, by:

Chief Procurement Officer
EOI 11120, Commissioning Services
West Virginia Higher Education Policy Commission
1018 Kanawha Boulevard, East, Suite 700
Charleston, WV  25301

Section 5. Other Information

5.1 The successful firm must be a registered vendor with the Purchasing Division, WV Department of Administration, and have a valid vendor number.

5.2 The successful firm will be expected to have general liability insurance, professional liability insurance, automobile liability insurance and Workers’ Compensation Insurance pursuant to Exhibit G below for the duration of the project and provide certificates of insurance to document such coverage.

5.3 The following identifies the insurance required for this contract. Successful firms must provide current Certificates of Insurance for the following:

- General Liability: $1,000,000 per occurrence, $2,000,000 aggregate;
- Automobile Liability: $1,000,000 combined single limit;
- Workers Compensation: West Virginia Statutory requirements including WV Code §23-4-2 (Mandolidis); and
- Professional Liability: $1,000,000 each occurrence on a claims made basis.

5.4 The following is a list of exhibits that are attached and are applicable to this request for EOIs:

- Exhibit A, Instructions to Bidders
- Exhibit B, Terms and Conditions
- Exhibit C, Agreement Addendum (WV96)
- Exhibit D, Prompt Pay Act of 1990 (WV Code §5A-3-54)
- Exhibit E, No-Debt Affidavit
- Exhibit F, Vendor Registration and Disclosure Statement