**May 2015**

**Invitation to Quote:**

**Automation consultancy service**





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| **1. OVERVIEW FOR SUPPLIERS:**   |  | | --- | | Aston University’s European Bioenergy Research Institute (EBRI) invites you to submit a quotation for automation consultancy service, to integrate a gasifier and a dual fuel engine for combined heat and power generation.  Specifically, EBRI is seeking to procure the service of a control engineer specialised on automatic control and operation of CHP dual engines. | |

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| |  | | --- | | **2. KEY INFORMATION:**   1. EBRI invites you to submit a quotation for automation consultancy service, to integrate a gasifier and a dual fuel engine for combined heat and power generation. 2. The maximum value of this contract is £5,000 (exc. VAT). 3. The supplier is expected to provide technical support to the control engineers of the different subsystems and provide solutions after the first commissioning day. 4. the consultancy service on how to modify the load matching system and the engine control system, so that the gasifier can be run coupled to the engine. 5. **The deadline for receipt of formal quotations for this project is 12.00pm on Monday 29th May 2015**. Your quotation document should be provided via email to David Walton at the following address: [d.walton@aston.ac.uk](mailto:d.walton@aston.ac.uk) 6. The quotation document must make reference to the following information:    1. The specifications and requirements detailed in ‘Section 5: Specification of Required Activity’, including Forms 1 and 2.    2. Your experience in providing this service and capability to meet the criteria detailed in ‘Section 6: Supplier Requirements’    3. Details of all proposed financial costs with reference to ‘Section 8: Contract Value’ | |

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| **3. OBJECTIVES OF THE INVITATION FOR QUOTATION:**  The purpose of this invitation is to identify a qualified supplier to provide the required product detailed in this request for quotes specification. |

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| **4. BACKGROUND INFORMATION:**  The European Bioenergy Research Institute (EBRI) at Aston University is a world-leading centre for bioenergy research and technology development. EBRI is home to both academic and industry-facing teams that aim to accelerate the commercial deployment of emerging bioenergy technologies. EBRI’s research and technology capabilities extend to cover the breadth of advanced thermal and biological conversion processes, including gasification, pyrolysis, anaerobic digestion and thermo-chemical refining of biomass and plastics to high-quality engine fuels.  The bioenergy sector is an acute priority for the West Midlands region as geographic constraints limit the region’s potential to generate renewable energy from alternative technologies such as wind, marine and tidal power. Similarly, the commercialisation of emerging bioenergy technologies can stimulate growth in the region’s manufacturing, power technologies and engineering sectors and lead to the development of an internationally competitive bioenergy supply chain.  Whilst the West Midlands has a significant number of companies and sectors with potential to operate in the bioenergy sector, their entry into the market can be hindered by an information deficit and lack of access to specialists and experts. To encourage and enable West Midlands businesses to take advantage of growth opportunities in the bioenergy sector EBRI has been awarded funding from the European Regional Development Fund (ERDF) to deliver a programme of structured industry engagement.  This programme – the EBRI ERDF Project - is designed to support the development of a regional bioenergy supply chain and promote the adoption of innovative new bioenergy technologies across the West Midlands. See EBRI ERDF Project website for more details (<http://bioenergy-midlands.org/>). |

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| **5. SPECIFICATION OF REQUIRED ACTIVITY:**  At the EBRI plant, a fluidised bed gasifier (1 MW) is connected to a combined heat and power generator. The capacity of the engine is not enough as to take all the gas from the gasifier, so part of the gas has to be flared.  The engine is a MAN marine diesel engine modified to work in dual mode (liquid and gaseous biofuels). The engine starts in liquid fuel mode and if required the load matching control system opens an isolation valve to start fuelling the engine with gas from the gasifier. A flowmeter measures the gas flowrate being burned in the engine.  Apart from this isolation valve, also a fast acting valve is being installed, to regulate the delivery of fuel gas to the engine, to prevent the engine stall when responding to fluctuations in pressure in the supply line. With the previous configuration, the transition from liquid to gas mode was taking place with delayed air to fuel ratio regulation.  EBRI is seeking to procure provide consultancy service on how to modify the load matching system, the engine control system (ComAp) and the gasifier control system, so that the gasifier can be coupled to the engine.  The job includes **liaising with the control engineers** for the different subsystems: the load matching system, the engine control system and the gasifier control system. The objective is to get the whole process properly integrated to work as a unified system.  The awarded supplier must have **experience on programming and operation of CHP dual fuel engines**.  The supplier is expected to first provide technical support to the control engineers of the different subsystems and finally provide further solutions after the first commissioning day.  The outcome of this job is having the CHP engine working on syngas from the gasifier on a smooth and safe way.  Further assistance on the Hazop study that is planned to take place after the first commissioning date may also be offered as an option. |
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| **6. SUPPLIER REQUIREMENTS:**  Suppliers must be able to start the work as soon as possible and work closely to EBRI contractors during the following months.  The successful supplier will be expected to supply the product at reasonable price and provide with technical support after commission.  **Scoring System:**  Each criteria will be assessed using the points allocation below:  1 (Poor) 2 (Satisfactory) 3 (Good) 4 (Very good) 5 (Excellent)  Points awarded against each criterion will be adjusted using the agreed **weighting** system to provide a **TOTAL WEIGHTED SCORE** for each tenderer to determine the successful tenderer.  Assessors: Dr Clara Serrano, Jim Scott   |  |  | | --- | --- | | **Criteria description** | **Weighting %** | | Specification and technical compliance | Pass/fail | | Previous experience in similar works | 90 | | Pricing | 10 | |

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| **EVALUATION** | | | | |
| **Compliance with Specification** | | | | |
| 1 | Can the technical specification above be met, please confirm?(PASS/FAIL) | | |  |
| **Quality** | | | | |
| 2 | Please outline your previous experience of programming CHP dual fuel engines. | | |  |
| 3 | Please outline your previous experience of providing a similar service, integrating systems as detailed in the specification. | | |  |
| 4 | Please attach the CV for the key personnel proposed for this work, outlining the qualifications and previous experience. | | |  |
| **Service Offer and Pricing** | | | | |
| 5 | | Please return a quote on official company letterhead paper.  Travel expenses must be included in the total cost.  Please detail the hourly rates. |  | |

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| **7. Contract Schedule**  The contract period will be for a term of 1 month, extended as required. The after-sale service should be charged at the prices stated in the quotation given. |

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| **8. CONTRACT VALUE**  The maximum value of this contract is £5,000 (inclusive of all charges excluding after-sale service and VAT).  Please provide and attach detailed costs on an official quote (letter headed paper). |

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| Please confirm that the specification above can be met. |  |
| Name of contact and details for this RFQ |  |
| Please confirm that you agree to work against Aston University's payment terms and conditions? Please see the link below (clause 5). |  |

### ASTON UNIVERSITY STANDARD CONDITIONS

### OF CONTRACT FOR GOODS AND SERVICES

<http://www.aston.ac.uk/staff/centralprocurement/procurement/standardtermsandconditions/>