

Request for Proposals (RFP)

The provision of Consulting / Owner's Engineer services for the establishment and development of a Biogas power plant to the CSIR

RFP No. 3154/10/11/2017

Date of Issue	Monday, 09 October 2017	
Closing Date	Friday, 10 November 2017	
Place	Tender box, CSIR Main Reception, Gate 3 (North Gate)	
Enquiries	Strategic Procurement Unit	E-mail: tender@csir.co.za
CSIR business hours	08h00 – 16h30	
Category	Professional Services	

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SECTION A – TECHNICAL INFORMATION

1 INTRODUCTION

The Council for Scientific and Industrial Research (CSIR) is one of the leading scientific research and technology development organisations in Africa. In partnership with national and international research and technology institutions, CSIR undertakes directed and multidisciplinary research and technology innovation that contributes to the improvement of the quality of life of South Africans. The CSIR's main site is in Pretoria while it is represented in other provinces of South Africa through regional offices.

2 BACKGROUND

An Energy-Autonomous program has been initiated to make the CSIR's main campus in Pretoria energy autonomous in a 5- to 8-year time horizon by supplying its energy from the three primary energy sources: solar, wind and biogas from biogenic waste. The power generators will be combined with electricity and heat storage, integration of electric and hydrogen-driven vehicles, power-to-liquids and power-to-gas processes, demand-side management and energy-efficiency measures.

This program will stand as a real-world research platform for designing and operating a primarily renewables-based energy system at the lowest possible cost in R/kWh. This platform will be used to demonstrate in a real-world setting of significant size (> 10 MW total installed capacity) how a future energy system that is based on a combination of fluctuating and dispatchable renewables can be designed and operated in the most cost-efficient manner.

One part of the program is the biogas plant on CSIR campus which will provide a baseload when the solar and wind energy are not available. The biogas plant will have a CHP facility where heat energy will also be produced onsite.

2.1 PROJECT STATUS

The project development commenced with a pre-feasibility study which was concluded in 2015. The outcome of the study confirmed that there is a viable business case for the development of the Biogas power plant at the CSIR. This led to the commencement of the next phase of the project i.e. conducting an environmental impact assessment and waste feedstock analysis

study. The biogas potential sites has been considered and a draft Notice of Intent has been developed. Specialist studies are currently taking place and the completion of the studies will allow CSIR to apply and obtain the necessary licenses.

The plant capacity is expected to be 1-3 MW electrical capacity, with a maximum feedstock of 45 000tons per annum. The feedstock is expected to be 100% organic in dry and liquid form. CSIR is currently looking to secure more feedstock in addition to what has been predicted in the waste feedstock analysis study, hence waste is not yet secured in a formal manner. From the waste feedstock analysis study the accessible range of organic material available that are within a 50km radius are as follows: Mined organic waste, food waste, effluent sludge, garden waste and abattoir waste is also an option. This waste is produced from waste management service providers, food manufacturers, retail facilities and agricultural waste.

3 INVITATION FOR PROPOSAL

Proposals are hereby invited for the provision or supply of consulting services to perform Owner's Engineer for the CSIR Biogas plant project.

The activities required for the completion of the Project will be divided into two stages namely: technical design and EIA support and will be awarded to local and international contractors and suppliers with appropriate expertise and capability.

4 PROPOSAL SPECIFICATION

All proposals are to be submitted in a format specified in this enquiry (if applicable). However, tenderers are welcome to submit additional / alternative proposals over and above the originally specified format.

DELIVERABLES/ SCOPE OF WORK

The expert consultant/ service provider is required to provide CSIR with detailed technical design, the implementation of biogas technology based on the feedstock available and support with the ongoing EIA process as well as environmental benefits. See below detailed scope of work to be considered:

The contractor shall recommend optimum power plant capacity based on the amount of feedstock and the equipment configuration with heat-mass balance diagrams.

- Assessment of possible energy conversion technology and digester type.
- Provide solution based on the feedstock inventory report on which suitable waste feedstock will be best utilised based on availability and efficiency.
- Calculating reactor volume, sludge retention time and organic loading rate based on the feedstock analysis results.
- Determine heat capacity based on the power output from a CHP facility and CHP equipment suitable for the project.
- Provide solution for heat produced from the CHP facility and how CSIR can utilise the heat maximally.
- Provide possible solution for storage of the gasses produced from the biogas facility.
- Recommend high level laboratory testing facility.
- Prepare design development drawings including draft technical details and specifications.

Each design shall include the following:

- Process diagrams showing waste intake for minimum, average and maximum cases with optimal output ratios for electricity and heat. For each case the contractor shall also estimate the maximum production of each of the following components: liquid fertiliser, solid fertiliser, heat and electricity.
 - Technical specification for all major equipment.
 - Piping and Instrumentation diagrams (P&IDs) for all major systems and interfaces.
 - Electrical interconnection requirements and waste delivery and production facilities.
 - Evaluating the electrical consumption of the Biogas facility.
 - Sizing the CHP plant.
 - Analysing methane gas to power conversion process including heat and equipment required.
- Using the outputs generated above, calculate costs and benefits and discuss opportunities to use the solid material generated after digestion for other beneficial uses including compost.
 - The contractor shall recommend the quality/marketability of the remaining liquid and solid material and provide a cost benefit as to the cost to generate Class A vs. Class B solids.
 - Estimate Capital Expenditure (Capex) and Operations & Maintenance (Opex), see Annexures A below.
 - Provide business model in excel sheet.

- Provide detailed employers works information which can be utilised for CSIR EPC tender.
- Attendance of kick off meeting and site briefing session by the end of project at CSIR Pretoria campus.
- Estimation of local content for the biogas plant.
- Estimation of job creation during construction and O&M phase of the project.
- Support and give input during the EIA phase for the following requirements:
 - Attendance of 2 x Focus group meetings (if required)
 - Attendance of 1 x Open House event
 - Provision of site plans in pdf format and AutoCAD format.
 - Accommodate revision of plans and provision of revised versions in pdf.
 - Availability for discussions regarding plans and technical queries.
 - Provision of comments on the Application Form, Scoping Report, and Environmental Impact Report.
 - Provision of a written project description.
 - Provision of information (i.e. calculations) on the required capacity for the proposed facility with respect to the following: electricity supply, sewage removal, bulk water supply and solid waste removal.
 - Sourcing confirmation of capacity letters for the above listed services from the municipality or Eskom.
 - Calculation of anticipated solid waste for the construction and operation phase of the development.
 - Provision of details regarding volumes and type of feed entering the system.
 - Provide motivation for the preferred Biogas technology
 - Provision of written responses relevant to Biogas technology to the Interested and Affected Parties (I&AP)

5 FUNCTIONAL EVALUATION CRITERIA

5.1 The evaluation of the functional / technical detail of the proposal will be based on the following criteria:

No	Functionality criteria	Weighting (%)
1	Experience of the consultant or service provider on biogas owners engineer or similar work in Sub Saharan countries	40
2	Proposed method, approach and programme	20

3	Provide written references for similar studies or work done	20
4	Proof of track record / capability to conduct the required services	20
Total		100

5.2 Proposals with functionality / technical points of less than the pre-determined minimum overall percentage of 70% and less than 40% on any of the individual criteria will be eliminated from further evaluation.

5.3 Refer to Annexure B for the scoring sheet that will be used to evaluate functionality.

6 ELIMINATION CRITERIA

Proposals will be eliminated under the following conditions:

- Submission after the deadline;
- If not registered with ECSA- Engineering council of South Africa or any internationally recognized professional body in the engineering sector(provide proof of certification)
- Proposals submitted at incorrect location.

7 NATIONAL TREASURY CENTRAL SUPPLIER DATABASE REGISTRATION

Before any negotiations will start with the winning bidder it will be required from the winning bidder to:

- be registered on National Treasury's Central Supplier Database (CSD). Registrations can be completed online at: www.csd.gov.za;
- provide the CSIR of their CSD registration number; and
- provide the CSIR with a certified copy of their B-BBEE certificate. If no certificate can be provided, no points will be scored during the evaluation process. (RSA suppliers only)

SECTION B – TERMS AND CONDITIONS

8 VENUE FOR PROPOSAL SUBMISSION

All proposals must be submitted at:

- **CSIR GATE 03 - Main Reception Area** (in the **Tender box**) at the following address
Council for Scientific and Industrial Research (CSIR)
Meiring Naudé Road
Brummeria
Pretoria

9 TENDER PROGRAMME

The tender program, as currently envisaged, incorporates the following key dates:

- Issue of tender documents: 09 October 2017
- Compulsory briefing session / site inspection etc.: N/A
- Last date for submission of queries: 08 November 2017
- Closing / submission Date: 10 November 2017
- Estimate appointment date of successful tenderer: 04 December 2017
- Estimated contract duration (in months/years) 20 months

10 SUBMISSION OF PROPOSALS

10.1 All proposals are to be sealed. No open proposals will be accepted.

10.2 All proposals are to be clearly marked with the RFP number and the name of the tenderer on the outside of the main package. Proposals must consist of two parts, each of which is placed in a separate sealed package clearly marked:

PART 1: Technical Proposal: RFP No.: 3154/10/11/2017

PART 2: Pricing Proposal, B-BBEE and other Mandatory Documentation:

RFP No.: 3154/10/11/2017

10.3 Proposals submitted by companies must be signed by a person or persons duly authorised.

10.4 The CSIR will award the contract to qualified tenderer(s) whose proposal is determined to be the most advantageous to the CSIR, taking into consideration the technical (functional) solution, price and B-BBEE.

11 DEADLINE FOR SUBMISSION

Proposals shall be submitted at the address mentioned above no later than the closing date of **Friday, 10 November 2017 during CSIR's business hours**. The CSIR business hours are between 08h00 and 16h30.

Where a proposal is not received by the CSIR by the due date and stipulated place, it will be regarded as a late tender. Late tenders will not be considered.

12 AWARDING OF TENDERS

12.1 Awarding of tenders will be published on the National Treasury e-tender portal or the CSIR's tender website. No regret letters will be sent out.

13 EVALUATION PROCESS

13.1 Evaluation of proposals

All proposals will be evaluated by an evaluation team for functionality, price and B-BBEE. Based on the results of the evaluation process and upon successful negotiations, the CSIR will approve the awarding of the contract to successful tenderers.

A two-phase evaluation process will be followed.

- The first phase includes evaluation of **elimination** and **functionality criteria**.
- The second phase includes the evaluation of **price** and **B-BBEE** status.

Pricing Proposals will only be considered after functionality phase has been adjudicated and accepted. Only proposals that achieved the specified minimum qualification scores for functionality will be evaluated further using the preference points system.

13.2 Preference points system

The 80/20 preference point system will be used where 80 points will be dedicated to price and 20 points to B-BBEE status.

14 PRICING PROPOSAL

14.1 Pricing proposal must be cross-referenced to the sections in the Technical Proposal. Any options offered must be clearly labelled. Separate pricing must be provided for each option offered to ensure that pricing comparisons are clear and unambiguous.

- 14.2 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.
- 14.3 Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable.
- 14.4 Only firm prices* will be accepted during the tender validity period. Non-firm prices** (including prices subject to rates of exchange variations) will not be considered.

**Firm price is the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax which, in terms of a law or regulation is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;*

***Non-firm price is all prices other than "firm" prices.*

- 14.5 Payment will be according to the CSIR Payment Terms and Conditions.

15 VALIDITY PERIOD OF PROPOSAL

Each **proposal** shall be valid for a minimum period of three (3) months calculated from the closing date.

16 APPOINTMENT OF SERVICE PROVIDER

- 16.1 The contract will be awarded to the tenderer who scores the highest total number of points during the evaluation process, except where the law permits otherwise.
- 16.2 Appointment as a successful service provider shall be subject to the parties agreeing to mutually acceptable contractual terms and conditions. In the event of the parties failing to reach such agreement CSIR reserves the right to appoint an alternative supplier.
- 16.3 Awarding of contracts will be announced on the National Treasury website and no regret letters will be sent to unsuccessful bidders.

17 ENQUIRIES AND CONTACT WITH THE CSIR

Any enquiry regarding this RFP shall be submitted in writing to CSIR at tender@csir.co.za with ***“RFP No 3154/10/11/2017 - The provision of Consulting / Owner’s Engineer services for the establishment and development of a Biogas power plant to the CSIR”*** as the subject.

Any other contact with CSIR personnel involved in this tender is not permitted during the RFP process other than as required through existing service arrangements or as requested by the CSIR as part of the RFP process.

18 MEDIUM OF COMMUNICATION

All documentation submitted in response to this RFP must be in English.

19 COST OF PROPOSAL

Tenderers are expected to fully acquaint themselves with the conditions, requirements and specifications of this RFP before submitting proposals. Each tenderer assumes all risks for resource commitment and expenses, direct or indirect, of proposal preparation and participation throughout the RFP process. The CSIR is not responsible directly or indirectly for any costs incurred by tenderers.

20 CORRECTNESS OF RESPONSES

20.1 The tenderer must confirm satisfaction regarding the correctness and validity of their proposal and that all prices and rates quoted cover all the work/items specified in the RFP. The prices and rates quoted must cover all obligations under any resulting contract.

20.2 The tenderer accepts that any mistakes regarding prices and calculations will be at their own risk.

21 VERIFICATION OF DOCUMENTS

- 21.1 Tenderers should check the numbers of the pages to satisfy themselves that none are missing or duplicated. No liability will be accepted by the CSIR in regard to anything arising from the fact that pages are missing or duplicated.
- 21.2 One hard copy and one electronic copy (CD or USB memory key) of each proposal must be submitted. In the event of a contradiction between the submitted copies, the hard copy shall take precedence.
- 21.3 Pricing schedule and B-BBEE credentials should be submitted with the proposal, but as a separate document and no such information should be available in the technical proposal.
- 21.4 If a courier service company is being used for delivery of the proposal document, the RFP description must be endorsed on the delivery note/courier packaging to ensure that documents are delivered to the tender box, by the stipulated due date.

22 SUB-CONTRACTING

- 22.1 A tenderer will not be awarded points for B-BBEE status level if it is indicated in the tender documents that such a tenderer intends sub-contracting more than **25%** of the value of the contract to any other enterprise that does not qualify for at least the points that such a tenderer qualifies for, unless the intended sub-contractor is an exempted micro enterprise that has the capability and ability to execute the sub-contract.
- 22.2 A tenderer awarded a contract may not sub-contract more than **25%** of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an exempted micro enterprise that has the capability and ability to execute the sub-contract.

23 ENGAGEMENT OF CONSULTANTS

The consultants will only be remunerated at the rates:

- 23.1 Determined in the "Guideline for fees", issued by the South African Institute of Chartered Accountants (SAICA); or
- 23.2 Set out in the "Guide on Hourly Fee Rates for Consultants", by the Department of Public Service and Administration (DPSA); or
- 23.3 Prescribed by the body - regulating the profession of the consultant.

24 TRAVEL EXPENSES

24.1 All travel expenses for the CSIR's account, be it directly via the CSIR's travel agent or indirectly via re-imburements, must be in line with the CSIR's travel policy. The following will apply:

24.1.1 Only economy class tickets will be used.

24.1.2 A maximum of R1300 per night for accommodation, dinner, breakfast and parking will be allowed.

24.1.3 No car rentals of more than a Group B will be accommodated.

25 ADDITIONAL TERMS AND CONDITIONS

25.1 A tenderer shall not assume that information and/or documents supplied to CSIR, at any time prior to this request, are still available to CSIR, and shall consequently not make any reference to such information document in its response to this request.

25.2 Copies of any affiliations, memberships and/or accreditations that support your submission must be included in the tender.

25.3 In case of proposal from a joint venture, the following must be submitted together with the proposal:

- Joint venture Agreement including split of work signed by both parties;
- The original or certified copy of the B-BBEE certificate of the joint venture;
- The Tax Clearance Certificate of each joint venture member;
- Proof of ownership/shareholder certificates/copies; and
- Company registration certificates.

25.4 An omission to disclose material information, a factual inaccuracy, and/or a misrepresentation of fact may result in the disqualification of a tender, or cancellation of any subsequent contract.

25.5 Failure to comply with any of the terms and conditions as set out in this document will invalidate the Proposal.

26 CSIR RESERVES THE RIGHT TO

- 26.1 Extend the closing date;
- 26.2 Verify any information contained in a proposal;
- 26.3 Request documentary proof regarding any tendering issue;
- 26.4 Give preference to locally manufactured goods;
- 26.5 Appoint one or more service providers, separately or jointly (whether or not they submitted a joint proposal);
- 26.6 Award this RFP as a whole or in part;
- 26.7 Cancel or withdraw this RFP as a whole or in part.

27 DISCLAIMER

This RFP is a request for proposals only and not an offer document. Answers to this RFP must not be construed as acceptance of an offer or imply the existence of a contract between the parties. By submission of its proposal, tenderers shall be deemed to have satisfied themselves with and to have accepted all Terms & Conditions of this RFP. The CSIR makes no representation, warranty, assurance, guarantee or endorsements to tenderer concerning the RFP, whether with regard to its accuracy, completeness or otherwise and the CSIR shall have no liability towards the tenderer or any other party in connection therewith.

DECLARATION BY TENDERER

Only tenderers who completed the declaration below will be considered for evaluation.

RFP No: 3154/10/11/2017

I hereby undertake to render services described in the attached tendering documents to CSIR in accordance with the requirements and task directives / proposal specifications stipulated in RFP No..... at the price/s quoted. My offer/s remains binding upon me and open for acceptance by the CSIR during the validity period indicated and calculated from the closing date of the proposal.

I confirm that I am satisfied with regards to the correctness and validity of my proposal; that the price(s) and rate(s) quoted cover all the services specified in the proposal documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this proposal as the principal liable for the due fulfilment of this proposal.

I declare that I have no participation in any collusive practices with any tenderer or any other person regarding this or any other proposal.

I accept that the CSIR may take appropriate actions, deemed necessary, should there be a conflict of interest or if this declaration proves to be false.

I confirm that I am duly authorised to sign this proposal.

NAME (PRINT)
CAPACITY
SIGNATURE
NAME OF FIRM
DATE

WITNESSES	
1
2
DATE:	

28 ANNEXURE A- Cost Breakdown

Ref	Component	Deliverables	Measureable Quantity	Unit Price (ZAR)	Total Price (ZAR)
1	Biogas technology	<ul style="list-style-type: none"> -Implement the suitable technology based on the feedstock inventory report -Possible energy conversion technology -Digester type -Suitable waste feedstock to be utilised -Utilisation of heat -Gas storage facilities -Laboratory testing facilities -Waste disposal 			
2	Technical design	<ul style="list-style-type: none"> -Designing the biogas plant system -Technical detail -Optimum power plant capacity -Determine heat capacity from CHP facility 			
3	Business model	<ul style="list-style-type: none"> -Capex -Opex -Interest rate and investment costa -Major equipment costs -EPC tender document preparation (Employers work information) 			
4	O&M	<ul style="list-style-type: none"> - O&M services for the first year - Overview of man-hours - O&M Training Programme 			
5	Local content	<ul style="list-style-type: none"> -Estimation of local content for the biogas plan -Job creation 			
6	EIA	-Refer to the deliverables/ scope of work above			
7	EPC	<ul style="list-style-type: none"> -EPC cost breakdown -EPC local content input 			
8	Site visits	<ul style="list-style-type: none"> -Number of site visits in Pretoria Campus (4 compulsory visits) 			

Ref	Component	Deliverables	Measureable Quantity	Unit Price (ZAR)	Total Price (ZAR)
				SUB TOTAL	
				VAT	
				TOTAL PRICE	

29 ANNEXURE B- Scoring Sheet

NO	Functional Criteria	WIEGHTING
1	<ul style="list-style-type: none"> • Experience of the consultant or service provider on biogas owners engineer or similar work in Sub Saharan countries <p>0 = No information provided 4 = less than 2 projects 7 = 2 to 5 projects 10 = more than 5 projects</p>	40
2	<ul style="list-style-type: none"> • Proposed method, approach and programme <p>0 = No information provided 4 = The method and approach for delivering the required services/assignment has been provided, but with some limitations as per the RFP specifications 7 = Clearly outlined method and approach for delivering the required service/assignment has been provided.- This includes structure; <i>financial analysis; O&M strategy; timelines and project plan</i> 10 = Clearly outlined method and approach for delivering the study has been provided.- This includes timelines, structure, and project plan</p>	20
3	<ul style="list-style-type: none"> • Provide written references for similar studies or work done <p>NB- No appointment letters/POs/Contract</p> <p>At least 3 signed references of similar work</p> <p>0 = No information provided 4 = One reference 7 = Two references 10 = Three references</p>	20
4	<ul style="list-style-type: none"> • Proof of track record / cability to conduct the required services <p>0 = No sample provided 4 = Less than 4 succesfully completed projects 7 = A sample of consultant's work has been provided but relates to a completely different field or area (E.g biofuels, waste water treatment, etc) yet it is still satifactory 10 = A sample of the consultant's work has been provided and relates to the focus of work required (i.e Biogas industry)- <i>The service providers has sucessfully completed more than 7 projects</i></p>	20