**BIOREFINERY TECHNOLOGIES: EVALUATION, DEMONSTRATION, AND IMPLEMENTATION PROGRAMME**

**(A partnership between the Department of Science and Technology and the Council for Scientific and Industrial Research (CSIR))**

**ACCELERATED IMPLEMENTATION OF BIOREFINERY TECHNOLOGIES: OPEN CALL**

**Evaluation and Implementation of Biorefinery and Organic Waste Beneficiation Technologies and Solutions**

The **Programme** invites Expressions of Interest (EOI) from SMMEs, black industrialists, municipalities, HEIs and RTOs in response to this **Call focusing on technologies/solutions that will lead to accelerated implementation of biorefinery technologies.**

The Department of Science and Technology (DST), in collaboration with the Biorefinery Industry Development Facility (BIDF) at the CSIR, has established a programme to demonstrate waste beneficiation biorefinery technologies to bridge the gap between pre-commercialisation instruments for technology development and full entry into commercial scale. In addition, the intention is to provide sound technical advice from a trusted independent source (i.e., the CSIR) on available alternative waste biomass technologies. Through the specialised CSIR expertise and infrastructure available at the BIDF, the project aims to reduce the barriers for developing, testing and adapting biorefinery technologies applied to South African biomass sources. This avoids the need for new and existing players to individually invest in R&D infrastructure and specialised R&D staff to demonstrate new technologies for implementation in South Africa.

The objective of the project is to:

• Implement technologies to maximise use of valuable natural resources by minimising generation of waste;

• Implement technologies for beneficiation of waste biomass to avoid landfilling the waste via production of high value materials and products from the waste;

• Demonstrate the validity of technologies and their potential to increase revenues in the sector;

• Enable demonstrable technology transfer to SMMEs/municipalities/large industry to build sustainable businesses;

• Increase industry competitiveness through local technology development and localisation of technology; and

• Develop human capital development and thus impart skills relevant to the industry through training and technology transfer (a separate call will be issued on this objective).

**The call seeks to identify high impact technologies and practices in the following categories:**

**A. Beneficiation of waste organic biomass to avoid landfilling of the waste**

**B. Beneficiation of waste organic biomass to enable maximum utilisation of biomass resources**

**C. Implementation of technologies for development of new value chains from organic waste**

**D. Development of new value chains from clearing of alien invasive species**

**E. Implementation of technologies for development of new value chains from biomass resources**

**Examples of waste organic biomass include lignocellulosic biomass (woody and non-woody materials), agro-processing wastes, abattoir wastes, shellfish and fishery wastes, etc.**

Submissions should provide sustainable biorefinery and organic waste beneficiation solutions to urban, peri-urban and/or rural areas and take into account operational effectiveness, social preferences, biomass resource availability, affordability, economies of scale, and cost reductions. Projects that require localisation of technologies developed or used outside of South Africa are also eligible for consideration.

**REQUIREMENTS**

Respondents should demonstrate the underlying scientific principles behind their technologies, and provide the following:

1. A clear definition of the goal of the project, together with the scope of the project and time frame;

2. A clear understanding of the market of the intended technology;

3. A description of the technology, e.g., key features, impact, competitive advantage, etc;

5. The type of biomass/feedstock that will be used should be specified;

6. The projects should be completed within a 2 year period.

7. A clear indication of the (intended) socio-economic impact resulting from implementation of the solution.

*Selection of projects will be based on criteria that include high impact in terms of improved competitiveness, SMME development, and socio-economic impact. Additionally, projects that include women and young people as beneficiaries will be prioritised.*

**FUNDING**

The equipment and expertise available at the BIDF and other CSIR facilities will be used to develop, validate, or evaluate proposed technologies. **Where applicable, the CSIR will purchase equipment for evaluation either at the BIDF or at the intended location of the proposed technology. At the end of the evaluation, the user will have the option of purchasing the equipment outright at 40% of the cost; otherwise the equipment will revert to CSIR.**

The EOI should be concise and include diagrams and photos.

EOI in PDF format must be emailed by no later than Wednesday, 5 June 2019 by the close of business (16h00). Late applications will not be considered.**If no confirmation of receipt of EOI is received within 72 hrs the application has not been received and will not be eligible**

**CONTACTS:**

**Email Subject Title**: Accelerated Implementation of Biorefinery Technologies Proposal

**Email Submissions**: [BIDF@csir.co.za](mailto:BIDF@csir.co.za?subject=Accelerated%20Implementation%20of%20Biorefinery%20Technologies%20Proposal)

**Queries**: Prof. Bruce Sithole **Phone**: 031 242 2325; **Cell**: 076 382 6337

**SUBMISSION REQUIREMENTS**

To apply, please complete the attached EoI form and e-mail the PDF versions of completed forms, CV’s, BBEEE certificate /affidavit and proof of CIPC registration to [BIDF@csir.co.za](mailto:BIDF@csir.co.za?subject=Accelerated%20Implementation%20of%20Biorefinery%20Technologies%20Proposal) .

Please use the following naming convention for attached documents:

|  |  |
| --- | --- |
| **Application:** | **CV’s, Certificates etc**: |
| Name of Enterprise\_EOI- June 2019 | Name of Enterprise\_CV Jane Doe\_June2019,  Name of Enterprise\_CIPC proof of registration\_June 2019 |

The ability to co-fund this application and commitment to transformation will be an advantage.

**Exclusionary Criteria:**

* EOIs will **NOT** be considered if they relate to new medicines, treatments or cures for diseases, or do not involve manufacturing, or do not improve competitiveness and revenue within the short term (within 6-24 months of acceptance of the proposal by the CSIR-BIDF).
* Applicants’ enterprise must be registered with the CIPC and proof of registration and tax clearance certificates must be provided with the application or will be excluded from the process
* Applications that are not accompanied by CV’s will be excluded
* Applications sent to any e-mail address other than [BIDF@csir.co.za](mailto:BIDF@csir.co.za?subject=Accelerated%20Implementation%20of%20Biorefinery%20Technologies%20Proposal) will be excluded
* Closing date for applications: **Wednesday 5 June 2019**, no late submissions will be considered

**REPORTING REQUIREMENTS**

Successful applicants will be expected to report on technologies implemented at the end of the project. Other reporting requirements will be established during contracting.

**For more information please contact:** Prof. Bruce Sithole E-mail ([BIDF@csir.co.za](mailto:BIDF@csir.co.za?subject=Accelerated%20Implementation%20of%20Biorefinery%20Technologies%20Proposal)) **Terms and conditions apply.**

**BIOREFINERY TECHNOLOGIES: EVALUATION, DEMONSTRATION, AND IMPLEMENTATION PROGRAMME**

**Expression of Interest proposal**

***Successful bidders may be invited for a more detailed interview***

**Closing date for applications: Wednesday 5 June 2019**

**Please e-mail PDF versions of completed submission forms to:** [BIDF@csir.co.za](mailto:BIDF@csir.co.za?subject=Accelerated%20Implementation%20of%20Biorefinery%20Technologies%20Proposal)

**If no confirmation of receipt of EOI is received within 72 hrs the application has not been received and will not be eligible**

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| **Enterprise name:** | |  | | | | | | | | | | |
| **CIPC registration number:** | |  | | | | | | | | | | |
| **Contact person(s):** | | **Name and surname:**  **Position in enterprise:** | | | | | | | | | | |
| **Contact details** | | **E-mail:**  **Landline:**  **Cell number:**  **Physical address of enterprise:**  **Postal address of enterprise:** | | | | | | | | | | |
| **Ownership arrangement** | |  | | | Demographic | | | | | Gender | | |
| Black | | White | | | M | | F | |
| **Directors/members** | |  | | | | | | | | | | |
| **Years in business** | |  | | | | | | | | | | |
| **Annual Revenue (if any)** | |  | | | | | | | | | | |
| **Number of current employees** | | Permanent: |  | | | Temporary: | | |  | | | |
| **Applicable biomass or organic waste processing sector:**  (E.g., forestry, poultry, agro-processing, abattoir, fishery, organic wastes, etc.) | |  | | | | | | | | | | |
| **BBEEE status level** | |  | | Attach BBEEE certificate/ or affidavit | | | | | | | | |
| **Date of application:** | |  | | | | | | | | | | |
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| **1. Choose the description that best defines your current need (mark with an x)** | | | | | | | | | | | | |
| 1. Running an existing sustainable/profitable biomass processing business with a requirement to: localise technology, evaluate/confirm yields, verify/validate or trouble-shoot the technology you are currently using (no additional equipment required) | | | | | | | | | | |  | |
| 1. Need to scale-up your existing operation (equipment required) | | | | | | | | | | |  | |
| 1. Planning to start up a new line of waste beneficiation business and require assistance to evaluate and possibly localise new technology and associated equipment (equipment required) | | | | | | | | | | |  | |
| **2. Do you have:** | | | | | | | | | | | **Y/N** | |
| 1. A secured source of waste or biomass? | | | | | | | | | | |  | |
| Please specify type, source and available amount of waste as well as nature of agreements in place with waste or biomass provider: | | | | | | | | | | | | |
| 1. An uptake agreement for your end product with an existing client? | | | | | | | | | | |  | |
| 1. An approved Environmental Impact Assessment (EIA) for your site (where applicable)? | | | | | | | | | | |  | |
| 1. A secured supply of water to efficiently process the required volume of waste? | | | | | | | | | | |  | |
| 1. A technology to be licensed in? | | | | | | | | | | |  | |
| 5.1 Is the technology Foreign? | | | | | | | | | | |  | |
| 5.2 Is a license for the technology in place (please provide proof) | | | | | | | | | | |  | |
| 1. An awareness of the regulatory requirements for the processing of waste | | | | | | | | | | |  | |
| 6.1 Are you currently compliant with these regulations? | | | | | | | | | | |  | |
| 1. In cases where purchase of equipment in required do you have the required 40% co-funding? Please provide proof. | | | | | | | | | | |  | |
| **3. Description of your core business and whether you are currently manufacturing and/or selling products as well as your current turnover** | | | | | | | | | | | | |
| Core Business:  Current status of manufacture and scale at which manufacturing:  Current annual turnover: | | | | | | | | | | | | |
| **4. Description of the market need addressed by your product/processes and the potential market size (try and be as specific as possible)** | | | | | | | | | | | | |
| Market need:  Your potential market size: | | | | | | | | | | | | |
| **5. Description of the product(s) you wish to manufacture and what differentiates them from competitor products.** | | | | | | | | | | | | |
| Product description:  Competitor product: | | | | | | | | | | | | |
| **6. Description of the technology you plan to use to manufacture the product.** | | | | | | | | | | | | |
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| **7. What is the expected development time to market?** | | | | | | | | | | | | |
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| **8. Please indicate the potential social and economic impact of the proposed technology/business, planned revenue over 5 years.** | | | | | | | | | | | | |
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| **9. Please list all sources and value of funding/support received to date.** | | | | | | | | | | | | |
| **Source**  (E.g., TIA, IDC, Government, venture capital, incubator support etc.) | **Programme** | **Nature of support** (funding/training/mentorship etc.) | | **Value of support if known** | | | | **Period of support** | | | | |
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| **10. Are you currently incubated/supported by any other incubator, enterprise supply chain development programme etc.? Please specify support being received.** | | | | | | | | | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **11. Team composition (both business/technical management; if not identified, proposed):**  *List your team: What is the team’s background, expertise & experience (business & technical)* | | | | | | **Name** | **Highest academic qualification** | **Position in proposed entity** | **Previous business management/technical positions/experience** | **Previous experience in proposed biomass or organic waste processing business area** | |  |  |  |  |  | | | | | | | | | | | | | |
| **11. Please attach short resumes/CV’s (1/2 page each) of key personnel in your enterprise** | | | | | | | | | | | | |
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| **12. Support requirement:**  *Specify what support is needed from the BIDF* |
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