

TERMS OF REFERENCE (ToR)

Service procurement to supply, installation of briquetting machines/components, and provision of trainings for 2 lots (6 selected sites) in South Nations and Nationalities People's Region (SNNPR)

PN: 14.2275.7- 070.00

1. Background

The Energising Development (EnDev) is a multi-donor, multi-implementer energy access partnership currently financed at global level by six donor countries – the Netherlands, Germany, Norway, the United Kingdom, Switzerland and Sweden. As a part of the global programme, EnDev Ethiopia has additional co-funding from Ireland, Korea and the European Union. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) as lead agency for the implementation of the programme and cooperates closely with the Netherlands Enterprise Agency (RVO) at global level as well as other implementation partners at country level. Currently, EnDev is implemented in 25 developing countries in Africa, Asia and Latin America.

EnDev promotes sustainable access to modern energy for households, social institutions and small to medium-sized enterprises. The supported energy services meet the needs of the poor, i.e. are long lasting, affordable and appreciated by users. The bottom-up approach applied by EnDev contributes to creating positive economic, social and environmental impacts. Since its initiation in 2005, EnDev has attained a prominent position in the international energy access debate. EnDev is one of the first outcome-based and performance-based programmes in the energy sector. EnDev pioneers innovative approaches, develops new markets for pro-poor energy access and scales up successful interventions.

In partnership with Irish Aid EnDev Ethiopia aims at the dissemination of Improved cookstoves and alternative fuels carbonised briquettes to reduce the negative effects of toxic and pollutant gases on health from indoor air pollution as well as on the environment generated by traditional cooking stoves, to improve the health of Ethiopian families, and create job opportunities especially for women and youth in both urban and rural areas.



As part of these interventions, EnDev Ethiopia;

- Shall provide support to existing briquetting enterprises/cooperatives to enable them up-scale their production to a scale of economies for viable and sustainable briquette charcoal market development as alternative cooking fuels options
- Shall provide support in building capacities of the enterprises to develop effective and sustainable briquetting production and marketing skills.

Against this background, the purpose of this ToR is to procure service provider to supply, install briquetting machines and provide technical training for six selected briquetting production sites in SNNPR; namely, Wolaita Sodo, Hossana, Wolkite, Bonga, Mizan-Aman and Tepi.

2. Overall Objective

The general objective of service procurement is to supply, install briquetting machines, prepare operation manual and provide technical trainings to the selected six sites (Lot I – three sites and Lot II – three sites) to up-scale their production system to make them viable and scale of economies to support sustainable briquettes fuel marketing and business development in these areas.

3. Specific Objectives

The specific objectives of service procurement are:

- To supply briquetting machines/components which mainly include – carbonizer/kiln, crushing/milling, melding and pressing machines – in accordance with specification provided in Annex A.
- To install briquetting machines/components to the selected briquetting enterprise's/cooperatives – based on their needs indicated in the Annex.
- To prepare training materials package and provide technical trainings on specific briquettes production machine and usage processes.
- To prepare an illustrative- clear to understand end-user's manuals for each supported machine element with local languages tailored to the specific selected sites' needs.

4. Scope of the Work

Under the guidance and direct supervision of GIZ EnDev, the consultant or service provider is responsible for the following work in the context of this assignment:

- Supply pressing and/or crushing machines and carbonizer/kilns in accordance with specification provided by EnDev Ethiopia for the six (Lot I & II) selected sites;
- Install the machines based on specific **needs of the** selected **six (Lot I & II)** sites;
- Provide trainings on key operation of the specific machine operation and key processes. In addition, basic maintenance aspects of the machines should be incorporated in the training manual.
- Prepare an illustrative-easy to understand end-user's manuals by respective local languages to the respective briquette charcoal producers.
- Engage and work in collaboration with selected briquetting enterprises/cooperatives and other relevant implementation partners – including energy experts, coffee processors unions, charcoal wholesalers, small and microenterprise offices, etc. in the selected six areas.

5. Place of Assignment

The place of assignment for the service will be in six selected sites of SNNPR; Lot I (Wolaita Sodo, Hossana and Wolkite) and Lot II (Bonga, Mizan-Aman and Tepi).

6. Major Activities

It is expected that the following activities will be executed:

- Prepare clear implementation approaches
- Supply the defined briquetting machines/components and install in the provided sheds by the enterprises
- Provide customized technical training for each selected briquette producing enterprises
- Compile and report the accomplished tasks from the six sites
- Work in collaboration with EnDev staff and implementing partners.



7. Deliverables

- Inception report outlining the approaches and execution programme/timetable should be provided by the consultant. This report shall be submitted for review and approval by EnDev two days after the signature of the contract before the commencement of the work.
- Supply briquette charcoal machines; single drum metal kilns, double drum metal kilns, motor driven hammer mill, motor driven helical extruder and hand press machine and install the machines at six sites (see Annex A for detailed Spec.)
- Prepare contextualized training module (package) to each selected site and provide training on machines' production processes such as carbonizing, cruising, binding and pressing of briquettes charcoal as well as provide trouble shooting.
- Submit the final report on executed tasks in electronic and hard copy (word and pdf format, including photos) incorporating the comments.

8. Remuneration

The payment for the service will be as per the agreement based on the financial proposal of the consultant and all the payments will be effected as per the GIZ financial rules and regulations.

9. Other Provisions

The consultant is responsible for:

- The proper implementation process to be followed and timing of planned activities as well as the quality of deliverables
- Sound communication and finalisation of results as per the agreed schedule.
- Appropriate logistical and travel arrangements as required to accomplish the assignment.

GIZ EnDev ET is responsible for:

- Provision of facilitation and coordination related to the assignment during the implementation frame work time
- Provide detail contact information of selected briquetting enterprise/cooperatives the regional office and others implementing partners.

10. Time Schedule

The service procurement (supply, installation and provision of training) will be completed in a maximum of three-month period upon signing of contract agreement. The timeline for key activities will be managed as per the agreed timeline between EnDev ET and the service provider/consultant not exceeding 90 days involvement. The draft and final report will be submitted as per the agreed schedule at the latest.

11. Management of Assignment

The service provision by the Consultant/service providers will be managed by Gossaye Shegenu and EnDev ET head office.

12. Required Profile, Qualification and Experience

In general, the potential consultant must fulfil;

- Good knowledge and understanding of briquetting system and machines, and production processes
- Ability to manage the available time and resources and to work to tight deadlines

Qualification

- The consultant/service provider for the assignment should meet the following criteria:
 - At least BSc/MSc. in manufacturing, industrial engineering, Renewable Energy, and small-scale manufacturing business development or other directly relevant technical discipline; preferably in briquetting machines system manufacturing.

Experience

Minimum 5 years work experience on the following fields:

- Relevant working experience including with experience in up-scaling of production, product optimisation;
- Experience on supply/manufacture, installation and training provision on briquetting production system
- Experience on biomass briquetting projects
- Excellent technical skills in biomass densification technologies –particularly in upgrading of low-quality biomass feedstock to high-quality biofuels
- Experience in briquetting machine supply/manufacturing, installation and trainings would be a strong advantage.



Language

- Excellent in English, with additional local language - both verbal and writing skills.

Competencies

- Good understanding of briquetting manufacturing and production process/system, in addition to knowledge on clean energy, renewable energy and energy needs.

13. Submission of Offer

Based on this ToR and information provided, interested consultants/service providers shall develop a proposal for the service provision and shall submit two separate offers, technical and financial, in a separate sealed envelope for the two lots. Companies can compete either for both or one of the lots.

A. Technical proposal, including:

- Any suggestions for improvement of the ToR and/or the assessment
- An outline of the proposed implementation procedures/approaches/methodology;
- A tentative work schedule for the service provision.

B. Financial proposal, including:

- Detail cost break down;
- Proposed budget.

Deadline and submission address:

The dead line for the submission of the offer is within two weeks upon official posting of bid.

German Development Cooperation , GIZ Office, Kirkos Sub City, Kebele 18 (Behind Intercontinental Hotel, next to the Central A.A Revenue Office)

P.O.Box: 100009

Addis Ababa, Ethiopia

Annex A: Specifications for supplied and types of briquetting machines

LOT 1							
No.	Item	Specification	Unit	Wolkite	Hossana	Wolaita sodo	Total
1	Carbonizer (Single drum metal kiln)	1000kg capacity	pcs	1	1	1	3
2	Carbonizer (Double drum metal kiln)	1000kg capacity	pcs	1		1	2
3	Crushing machine (Motor driven hammer mill with necessary accessories)	3phase, 5HP, 50kg per hour	pcs	1		1	2
4	Pressing machine (Motor driven helical extruder with necessary accessories)	3phase, 4HP capacity;40kg/hour	pcs	1	1	1	3
5	Pressing machine (Hand press beehive briquette)	Cylindrical beehive; diameter 12cm, height 8cm, #of hole 12, diameter each hole 2cm	pcs	1		1	2

LOT 2							
No.	Item	Specification	Unit	Bonga	Mizan-Aman	Tepi	Total
1	Carbonizer (Single drum metal kiln)	1000kg capacity	pcs	1	1		2
2	Carbonizer (Double drum metal kiln)	1000kg capacity	pcs	1	1	1	3
3	Crushing machine (Motor driven hammer mill with necessary accessories)	3phase,5HP, 50kg per hour	pcs		1		1
4	Pressing machine (Motor driven helical extruder with necessary accessories)	3phase, 4HP capacity;40kg/hour	pcs	1	1	1	3
5	Pressing machine (Hand press beehive briquette)	Cylindrical beehive; diameter 12cm, height 8cm, #of hole 12, diameter each hole 2cm	pcs		1	1	2

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