



TERMS OF REFERENCES

Job title:	Engineer – Short Term Consultant
Duty station:	Chisinau, Moldova and home based
Reference to the project	Moldova Energy and Biomass Project, Phase II
Contract type:	Individual Contract (IC)
Expected workload:	up to 632 days of consultancy (per consultant)
Period of assignment:	February 2015 – November 2017

BACKGROUND

The Moldova Energy and Biomass Project aims to contribute to a more secure, competitive and sustainable energy production in the Republic of Moldova through targeted support to the most viable and readily available local source of renewable energy, namely biomass from agricultural wastes.

As of December 2014 the project entered into its second phase which is to last until end 2017. The second phase of the project had received additional funding of 9.46 million EUR allocated by the European Union in the framework of the Eastern Partnership Integration and Cooperation (EaPIC) programme, with the objective to leverage the successful activities and extend them to so far not covered or underrepresented regions, specifically Transnistria, Gagauzia and Taraclia, and to support further consolidation of the biomass market in the country based on the experience and lessons learned in the first phase.

Among others, the second phase will also focus on the development of local biomass market and general market consolidation of the biomass-related businesses through continued support to solid biofuel producers and support to local biomass boiler production and extension of Public Private Partnerships for establishing sustainable biomass based heating services.

The project will continue to support installation of biomass heating systems in communities aiming to install at least 80 additional biomass-based municipal heating systems with specific focus on Transnistria, ATU Gagauzia, Taraclia district including small towns following the *participatory community development approach*. Installation of combined solar/biomass technologies will also be piloted in public buildings in order to provide integrated energy saving and energy-efficiency solutions.

For more information about the project please visit: www.biomasa.md, www.undp.md.

OBJECTIVE OF THE ASSIGNMENT

The general objective of the consultancy is to support MEBP in its efforts to provide technical assistance and build capacities among target local authorities and communities, in order to enhance skills and knowledge in the development and evaluation of biomass-based heating projects, in compliance with national building codes and technical standards, ensuring cost effective capital investment and efficient use of energy and resources, etc. Each target community will be enabled to appraise in a participatory manner project's scope of works, cost of works and budget, before approval.

The consultant is also expected to closely monitor the progress of works for the installation of the biomass-based heating systems in the selected communities in accordance with the contract requirements and applicable construction standards and legislation. Upon completion of works the consultant will arrange for and conduct the committees at the substantial and final completion of works.

The Engineer short term Consultant will work under supervision and in close collaboration with Senior Community Mobilization Officer and the rest of the Project Team for effective achievement of Project's objectives. The incumbent should prove sound knowledge in civil engineering, local construction norms and standards, national building laws, as well as extensive experience in implementing community heating projects.

KEY ACTIVITIES AND EXPECTED OUTPUTS

The main role of the Engineer - short term Consultant is to train and assist target local public authorities and project committees in assessing, developing and evaluation of the technical aspects of biomass heating projects, and preparing project proposals for approval as well as ensure on-site supervision of construction works, completeness of design and works performance documentation and arrange meetings of works reception committees. The Engineer - short term Consultant will ensure that in each community all information, documentation and permits are obtained which are required to develop a performance based Invitations to Bid for the design and installation of biomass heating systems and during the execution of works.

For the given purpose, Engineer - Short Term Consultant shall carry out the following tasks:

	Stage	Activities	Estimated workload
1	First field visit	1. Getting familiarized with communities' Expressions of Interest to implement a biomass project and development of the working programme. 2. Conduct <i>one day field visit to each community</i>. During this day Engineer participates in the community awareness raising and project promotion meeting informing community key stakeholders of the opportunities and challenges in relation to biomass heating technologies, their installation, operation and maintenance, and provides technical assistance to selected project committee in filling in the community project application form. 3. Assess the community's needs and capacities with regard to biomass heating project implementation 4. Assess technical suitability of the public building proposed for switching to biomass heating system as well as overall sustainability of the project. 5. Support selected project committee in filling in community project application forms. 6. Develop the first needs and capacities assessment report based on the observations and findings from the field, including technical feasibility report, and submitted to MEBP.	2 days per community Up to 60 communities

2	Monitoring/ Assessment and appraisal of project proposals	1. Continuous monitoring and on call technical assistance to each community in further preparation and evaluation of project proposals from both technical and financial perspectives, submission of complimentary documents, such as urban certificates, schemes, decisions, technical conditions, letters of guaranties, etc. Coordinate and collect inputs from the assessments undertaken by the Energy Audit specialists. 2. Conduct final technical evaluation of proposed projects in the community with the participation of community key stakeholders, representatives of mayoralties, local counselors, beneficiary institution, local biomass fuel provider, and other community members. The following shall be verified during the given <i>participatory</i> assessment: - Scope of proposed project works and preliminary estimated costs; - Energy efficiency measures; - Community's capital investment share; - Project's technical sustainability, - Community's capacity to supervise and ensure high quality works; - Evidence of all required complimentary documents, guaranty letters, permits, certificates, schemes, technical conditions, coordination with district state departments: ecological, architect, sanitary, fire security, etc. 3. Finalize preparation of project proposals before being submitted to Project Selection Committee for approval including the assessment report based on the observations and findings from the field including consultant's motivated recommendation regarding the proposal whether or not to move to the investment stage, as well as the risks that could emerge during project implementation.	3.5 days per community Up to 50 communities
3	Technical design	1. Undertake one familiarization visit with the contracted design company to the site and clarify technical aspects of the proposed design works. 2. Match the technical design documentation developed by the design company with the on-site situation and propose corrections/modifications as it may be required, prior to the launch of ITB.	1 day per site Up to 33 sites
4	ITB Preparation and evaluation	1. Support MEBP in the preparation of bidding documents for the selection of building company 2. Check the winning bid on its completeness and compliance with the requirements	1 day per site Up to 33 sites
5	Works supervision	1. Hand over project site and technical design documentation to contracted companies jointly with local communities; 2. Supervise the execution of construction works and ensure completeness of design and works performance documentation during the construction phase. • Permanently monitor, through close collaboration with Local Supervisors and municipalities, the performance of contracts/works and verify at project sites the volume and quality of construction works	6 days per site Up to 33 sites

		performed by the contracted companies and accepted by Local Supervisors; • Supervise the completion of execution documentation, necessary for the works completion reports submitted by the contracted companies to the local administration and Projects' Committees for certification; • Collaborate with the Local Inspectors, engineers assigned as by the communities as engineering inspectors for the supervision of works execution, in order to identify and solve various issues appeared on the construction site; • Work with contracted companies in order to identify possible shortcomings and report to the MEBP Engineer for consultation; • Collect works performance reports and verify their conformity; • Certify the works progress reports; • Monitor and ensure the works completion schedules and timeframes are respected by the contracted companies; • Regularly report to the PMT on the progress of works on the sites; • Monitor the execution of works performed by the communities as part of their contribution to the project; • Ensure the works are performed in compliance with the local legislation and applicable standards in construction; • Monitor the training of boiler operators and other staff responsible heating system exploitation by the contracted companies; • Jointly with the local administrations organize and participate at works reception committees upon substantial completion of works.	
6	Final reception of works	1. Jointly with the local administrations organize Final Works Reception Committees for the sites under his/her responsibility. 2. Ensure that any outstanding works identified upon substantial completion of works have been completed and the deficiencies discovered during the defects liability period were removed.	1 day per site Up to 33 sites
7	Heating systems operation monitoring	Monitor the way the installed heating systems are being operated by the communities by conducting snap site visits (at least 2 visits per year) after the completion of works. The information regarding the extent to which the heating systems are being used, availability of biomass fuel and other information regarding operation of the heating systems shall be gathered and submit to the PMT.	0.5 day per visit, per site Up to 80 visits

The timeframe for the delivery of each activity/output per community shall be coordinated and agreed in advance with the Senior Community Mobilization Project Officer.

The expected **outputs** are as follows

1. The first needs and capacities assessment report, including technical feasibility report developed and, and submitted to MEBP (per community).
2. Community project proposal along with the consultant's motivated recommendations completed and submitted to the Project Selection Committee for approval (per project proposal)
3. Certified technical design documentation compliant with the on-site situation (per site);
4. Accurate bidding documents developed (drawings, bills of quantities, scope of works), supported by all required documents collected from beneficiary communities (per site);
5. Complete and accurate documents certifying progress of works. Approved certificates of substantial completion of works (per site).
6. Fully functional biomass heating systems accomplished in compliance with the contract requirements. Approved certificates of final completion of works (per site).
7. Snap site visits reports with relevant data on operation of biomass heating systems presented to PMT (per visit).

INSTITUTIONAL ARRANGEMENTS

The Engineer – short term Consultant will work under supervision and in close collaboration with Project Engineer and overall supervision of Senior Community Mobilization Project Officer. He/she submits reports directly to Senior Community Mobilization Project Officer.

The main contact point of the Engineer – short term Consultant with MEBP Office shall be in Chisinau, but he/she will mainly work in the field, in communities in all regions of Moldova. The consultant is expected to undertake frequent field trips to beneficiary communities in Moldova over the entire period of contract. Transportation for all envisaged travels will be provided by UNDP. The assignment shall be carried out in a term of 33 months, starting February 2015 and terminating in November 2017.

The payments for services provided by the Engineer – short term Consultant will be released on a monthly basis based on actual volume of work performed (outputs/deliverables completed), measured and paid based on outputs delivered and accepted by Senior Community Mobilization Project Officer and MEBP Project Manager during the given reporting period.

QUALIFICATION REQUIREMENTS

- Education: University Degree in civil engineering and / or architecture;
- Work experience: at least five years of work experience in the engineering field or within a projecting company;
- Extensive experience in construction of small scale heating systems, preferably including biomass based heating systems and/or solar energy technologies;
- In depth knowledge of national legislation pertaining to the planning and construction of heating systems;
- Experience within community development programs is an asset;
- Language skills: excellent command of written and spoken Romanian and Russian is required; knowledge of English is an asset;
- Computer proficiency, including knowledge of MS Office products (Word, Excel, Power Point);
- High level of responsibility and organization capacities, creative approach to solving issues;
- Excellent communication and reporting skills;
- Ability to meet deadlines and prioritize multiple tasks.