



ENERGIE ȘI BIOMASĂ

Resurse energetice alternative pentru Moldova



Pre-bidding conference

Construction of 19 biomass based heating systems in conjunction with solar collectors for domestic hot water (4 Lots)

ITB17/01555

17 July 2017, 11:00

Le Roi International Business Center, 29 Sfatul Tarii str., Chisinau

Participants	
9 representatives of 7 companies attended the meeting	
UNDP Moldova	
1. Mihai Maciuca	MEBP Procurement and Contract Management Officer
2. Vitalie Vieru	MEBP Engineer

Background:

On 06 July 2017 UNDP Moldova issued an Invitation to Bid for the Construction of 19 biomass heating systems in villages of Moldova. The purpose of the Pre-bidding Conference is to clarify some aspects related to the procurement procedures as well as various technical aspects of the requirements.

The deadline for submission of bids is 10 August 2017, 14:00 local time. **Bids can only be submitted using the UNDP's e-tendering platform.** Bidders should follow the instructions for bidders published on tender's website.

The bids will be opened on 10 August 2017, 14:00, in the presence of bidders who choose to attend the bid opening.

According to the solicitation documents the bidders shall submit their bids for the construction of 19 biomass heating systems, grouped in 4 Lots. At some locations, the heating plants shall be connected with solar collectors for domestic hot water.

The meeting was conducted in 4 sessions:

1. Requirements presentation
2. Demonstration of BOQ completion
3. Demonstration of e-tendering bid submission module
4. Questions and answers

1. General presentation of the requirements

The following key aspects of the Data Sheet and the Schedule of Requirements were highlighted in particular:

- Bidders have the possibility to apply for one single LOT, or several LOTs, depending on their technical and financial capacity and their readiness to meet the specified deadlines. Contracts will be awarded for full Lots only, and in case a bidder does not provide an offer for even one site of a Lot, its offer shall not be considered eligible for the given Lot.

Moldova Energy and Biomass Project

- Bidders are required to submit Bid Security in the amount of 6,000 USD per Lot following the template included in the ITB. The guarantee shall be valid for minimum 150 days.
- The period for completion of works is 150 days. In case the contractor will not deliver all the works within this timeframe, UNDP may apply liquidated damages in an amount of 0.5% of contract price for each day of delay.
- The selected contractor(s) will be required to provide a Performance Security in an amount of 10% of contract.
- Offers should be presented in US Dollars, exclusive of VAT and other taxes;
- **The offers can ONLY be submitted electronically** through on-line bidding in e-tendering module at: <https://etendering.partneragencies.org>. time zone indicated in the e-tendering system is New York Time zone. Date and time visible on the main screen of event (on e-tendering portal) will be final and prevail over any other closing time indicated elsewhere, in case they are different.
- Bidders applying for more Lots shall additionally submit a Combined Work Time Schedule and a Combined Manpower Schedule, which shall demonstrate their capacity to fully accomplish the works within the required timeframe.
- The evaluation of bids shall be conducted separately for each Lot, and Bidders applying for more Lots shall be additionally evaluated against Evaluation Criteria for Bidders applying for more Lots listed in the Data Sheet.
- To facilitate participation of consortia, it is allowed that the consortium members jointly fulfil the qualification criteria. Particularly a consortium can be constituted of two members in which the consortium leader must comply with the financial qualification requirements and the other member fulfils the professional experience qualification requirements. In any case, both companies must have at least 3 years of experience;
- Manufacturer Authorizations must be provided for the boilers and solar collectors;
- All the offered biomass boilers must be manufactured in compliance with the EN 303-5. The relevant CE EN compliance certificates must be attached to the bid;
- The emissions levels of the boilers must not be worse than Class 3 EN 303-5:2012 requirements and certified by an independent laboratory that must be attached to the bid;
- The solar collectors must be manufactured in accordance with EN 12975-1 and accompanied by Solar Keymark Certificate. The relevant CE EN and Solar Keymark compliance certificates must be attached to the bid.
- It was made a distinction of projects that have to be specified under previous experience in the Bidder Information Form (Section 5) and Technical Bid Form (Section 6). In the Bidder Information Form (Section 5), para 9, Bidders are required to specify the 3 biggest clients in the past 3 years, while in the Technical Proposal Form (section 6), para 1.3, Bidders are required to specify each individual assignment/project completed in the past (where several assignments were completed for same client, each shall be individually described in the form).
- Occasionally in the technical design documents, may be mentioned a specific mark or model of equipment. Nonetheless, in any such case bidders may offer a substitute product that is technically equal to the specified product, meeting all its salient physical, functional and performance characteristics. In particular, the boilers must comply with the minimum specifications indicated in the Schedule of Requirements and in the BOQs;
- The offered boilers may be of a different size than the size specified in the designs, however bidders must present a scheme illustrating the boiler mounting outlining all the key dimensions taking into account all the auxiliary equipment in the boiler plant, in order to demonstrate that their mounting solution is conforming to the local normative exigencies;
- Contracts shall not be awarded to the lowest priced bids, but to the bids offering the lowest life cycle cost of the installation, comprising the cost of works as well as

Present Value of the fuel required for 10 years operation of the heating systems which depends on the burning efficiency of the offered boilers. The contract however will be signed for the price of works alone;

- The calculation of life-cycle cost shall be based on the boiler efficiency rated by the manufacturer or the efficiency rate specified by the bidders in their bids, whichever is lower, applying the test fuel specification provided in the Schedule of Requirements - cereal straw and sunflower husks, with calorific value up to 16 MJ/kg;
- Upon the commissioning of works the contractors will need to engage an independent accredited laboratory to conduct flue gas pollutant emissions measurements and on-site boiler performance test in order to confirm the performance characteristics stated in the bid. In case the boilers will be unable to render the stated performance the contractor may be requested to substitute the boiler or seek for other types of remedies;
- In case the actual efficiency is lower than the one provided to the tender by more than 1% the contractor will compensate the difference between the promised Life-Cycle Cost and the actual Life-Cycle Cost calculated based on the actual boiler efficiency. An illustration of how such compensation will be calculated is provided in para. 6.7 of the Schedule of Requirements and Technical Specifications;
- The compensation, if applicable, will be rendered in one of the following forms: retention from the amount of payments due to the contractor, validation of the Performance Security, supply of an equivalent amount of biofuel to the beneficiary;
- The boilers will mainly operate on biomass pellets, however the boilers should be also capable to operate on briquettes as a back-up solution. The requirement for 14 sites though, Bumbata, Radeni, Falestii Noi, Ciuciulea, Chiscareni, Cuhurestii de Sus, Stefanesti, Tatarauca Veche, Verejeni, Horesti, Cneazevca, Enichioi, Obileni and Taraclia, requires that boilers shall be operate on biomass briquettes and logs as primary fuel;
- The general warranty period for the works is 3 years. However, all passive components of the boiler shall be covered by 5 years warranty;
- The contractor shall provide servicing and maintenance of the installed heating systems for a period of 3 years, which among others also covers the warranty period. During this time the contractor will be required to conduct at least two regular maintenance and servicing of the heating systems per year, one upon commencement of the heating season and the second immediately after its termination. Additionally, the contractor will conduct at least 3 on-site servicing interventions in case of emergency situations during the 3 years operation period. The contractor will provide all labor, equipment and parts in this sense so that the beneficiary incurs no additional expenses in this relation during 3 years. All these works shall be included in the price schedules of the bid and will be paid by UNDP upon completion of works, however the contractor will be required to sign a maintenance and servicing contract with each beneficiary by which the beneficiary shall assume all the indemnification rights in this regard.
- **BOQs must be presented only in the form of the excel files attached to the bidding documents** that contain all the formulas for the calculation of total offers. Bidders must only fill-in the unit prices in the excel files, all other fields are locked for editing. This measure is meant to streamline the evaluation and comparison of offers thus, any **modification or intentional unlocking of BOQs is prohibited**. Any attempt to modify the file structure may lead to the rejection of the bid. Original excel files with unit prices inserted will need to be uploaded on the e-tendering platform as attachments to each Lot price.

Note 1: It has been noted that in Section 7, Price Schedule, the description of Site 4.5 has been mistaken. The correct name is: *4.5 Installation of biomass heating system in the kindergarten of the village Obileni, district Hincesti*. The Template of sections 7 shall be updated to reflect the correct site description, however the bidders may correct the form individually when preparing the bid.

Note 2: Bidders must submit the original Bid Securities by the tender's deadline to the UNDP Moldova Country Office at 131, 31 August 1989 Street, MD-2012 Chisinau, Moldova, or to bring at the bid opening. A scanned copy of the bid securities must be uploaded with the bid.

Additional note on the quality of bio-fuel.

- Bidders must consider the specific type of test-fuel required for the operation of the heating systems. Therefore, when choosing a boiler that has not been certified on this type of fuel, bidders are required to exercise due diligence and might need to offer a boiler that normally produces a higher output capacity with fuel of better specification, in order to also meet the stipulated performance requirements with bio-fuel specified under the Schedule of Requirements. All responsibility and risk associated with this lays on the bidders.

2. Demonstration of BOQ completion

A demonstration of how to complete the BOQs was given with the following aspects being highlighted in particular:

- **BOQs must be presented only in the form of the excel files attached to the bidding documents** that contain all the formulas for the calculation of total offers. Bidders must only fill-in the unit prices in the excel files, all other fields are locked for editing. This measure is meant to streamline the evaluation and comparison of offers thus, any **modification or intentional unlocking of BOQs is prohibited**. Any attempt to modify the file structure may lead to the rejection of the bid.
- Original excel files with unit prices inserted must be uploaded in the e-tendering module along with the bid.
- In order to calculate the Life-Cycle Cost, bidders must specify the boiler efficiency rate in the Boiler sheet of each site BOQ, along with all the specifications of the boiler as provided by the boiler manufacturer (the next example is provided for illustration purposes):

THE NEXT IMAGES ARE PROVIDED FOR ILLUSTRATION PURPOSES ONLY AND ARE BASED ON A PREVIOUS COMPETITION. ACTUAL NAMES OF SITES, NUMBER OF LOTS SITE NUMBER AND OTHER SITE INFORMATION MAY DIFFER, BUT THE WORKING PRINCIPLES AND APPROACH IN SUBMISSION OF THE BID IS SIMILAR TO THOSE SHOWN BELOW.

Lot:	1	Installation of biomass heating system in the gymnasium of the village				
Site:	1					
Boiler minimum specifications						
No	Item	Required Specification	Proposed specification	Quantity	Unit Price	Total, USD (col.5 x col.6)
1	2	3	4	5	6	7
1	Boiler	Boiler brand and model:	ABC	2.00	500.00	1,000.00
		Fuel type: agro-pellets type E, EN 14961-6 (as specified in Schedule of Requirements) *	Agro-pellets type E, EN 14961-6			
		Emissions limits: EN 303-5:2012 Class 3	Class 3			
		Q= 150 kW**	150 kW			
		Efficiency: minimum 80% ****	80.0%			
		Allowed operating pressure: ≥1,5 bar	2 bar			
		Maximal allowable working temp: ≥85 °C	90			
		Power supply: 230V/50Hz	230V/50Hz			
		Warranty on all moving/active components: 3 years	3 years			
		Warranty on all non-moving/passive components: 5 years	5 years			
		Burner cleaning mechanism: automatic burner cleaning system by mechanical means	Rotative type burner cleaning mechanism			
		Boiler flue duct diameter***: 380 mm	380 mm			
		Fuel bunker capacity: 850 l	850 l			
		Boilers' mounting scheme in the boiler plant is in compliance with local normative exigencies*****	Mounting scheme attached			
Total Cost without VAT:					1,000.00	

- Once the Efficiency rate has been inserted, the Site Price Schedule will automatically calculate the Life-Cycle Cost for 10 years period by summing up the Total Price of Works and the Present Value of Fuel Costs.

Lot:	1	Installation of biomass heating system in the gymnasium of the	
Site:	1	village	
Consolidated Site Price Schedule			Estimated amount in USD, without VAT
Cost component / Section			
1	Territory Arrangement		1,000.00
2	Thermomechanics		1,000.00
3	<i>Solar collector system for domestic hot water</i>		-
4	Heating and Ventilation		1,000.00
5	General Construction Works		1,000.00
6	Electricity and Lighting		1,000.00
7	Automation and control system		1,000.00
8	Water supply and sewerage		1,000.00
9	Fire safety system		1,000.00
10	<i>Fuel supply system</i>		-
11	Comissioning		1,000.00
12	Service and Maintenance works for 3-years of operation		1,000.00
Total Price of Works			10,000.00
No	Parameter	Unit	Value
1	Annual heat consumption	MWh	578.33
2	Boiler efficiency at nominal output	per cent	80.00%
3	Annual Fuel demand	MWh	722.91
4	Net calorific value of the test fuel	MJ/ton	15,000.00
5	Net calorific value of the test fuel	MWh/ton	4.17
6	Annual Fuel consumption	tons	173.50
7	Estimated Fuel price	USD/ton	110.00
8	Annual fuel cost	USD	19,084.87
9	Discount rate	percent	10%
10	Expected lifetime of the boiler	year	10
11	PV of fuel costs	USD	117,268
Life-Cycle Cost (Price of Works + PV of fuel costs)		USD	127,268.29

- The next step is to fill in the Lot Price Schedule as per Section 7, Price Schedule Form.

Section 7: Price Schedule Form ⁵			
The Bidder is required to prepare and attach with the bid:			
1. Lot Price Schedule;			
2. Site Price Schedule and Bill of Quantities (BoQ) for each individual Site;			
All prices/rates quoted must be exclusive of all taxes, since the United Nations, including its subsidiary organs, is exempt from taxes.			
The format shown in the attached BOQs shall be used in preparing the Price Schedule and the totals shall be included in the tables below.			
Lot Price Schedule		Estimated cost of works (USD)	Life Cycle Cost (USD)
1.	Lot 1		
1.1	Site 1: Installation of biomass heating system in the gymnasium of the village	10,000.00	127,268.29
1.2	Site 2: Installation of biomass heating system with solar collectors for domestic hot water in the kindergarten of the village		
1.3	Site 3: Installation of biomass heating system in the gymnasium of the village		
TOTAL LOT 1			

3. Demonstration of e-tendering bid submission module

A demonstration of e-tendering bid submission module was given. Bidders were advised to follow the guidelines in the eTendering Instructions Manual for Bidders published on the tender's website.

A particular attention was given on how to specify the price when submitting the bid as shown in the next pages:

- i) Bidders should first complete the Lot Price Schedule as per Section 7, Price Schedule Form (the next example is provided for illustration purposes):

Section 7: Price Schedule Form⁵

The Bidder is required to prepare and attach with the bid:

1. Lot Price Schedule;
2. Site Price Schedule and Bill of Quantities (BoQ) for each individual Site;

All prices/rates quoted must be exclusive of all taxes, since the United Nations, including its subsidiary organs, is exempt from taxes.

The format shown in the attached BOQs shall be used in preparing the Price Schedule and the totals shall be included in the tables below.

Lot Price Schedule		Estimated cost of works (USD)	Life Cycle Cost (USD)
1.	Lot 1		
1.1	Site 1: Installation of biomass heating system in the gymnasium of the village [redacted]	10,000.00	127,268.29
1.2	Site 2: Installation of biomass heating system with solar collectors for domestic hot water in the kindergarten of the village [redacted]	10,000.00	97,436.69
1.3	Site 3: Installation of biomass heating system in the gymnasium of the village [redacted]	10,000.00	103,477.22
TOTAL LOT 1		30,000.00	328,182.20

A **C**

- ii) Access the eTendering module and after registering and opening the bid event in the system, press the **Bid** button under the Step 2: Enter Line Bid Responses, where **each line represents the amount of Life-Cycle Cost for one Lot**.

Step 2: Enter Line Bid Responses

This event contains one or more individual lines that await your bid response. Some or all lines may require your bid in order for consideration by the Event Administrator.

Lines in This Event: 3

Your Total Line Pricing: 0.0000 USD

[Hide Line Detail](#)

★ Bid Required Line Comments/Files

Previous Lines 1-3 of 3 Next Lines

Line	Description	Unit	Requested Quantity	Your Bid Quantity	Your Unit Bid Price	Your Total Bid Price	
1	Construction work and site management, civil works	LO	1.0000	1.0000		0.0000 USD	Bid
2	Construction work and site management, civil works	LO	1.0000	1.0000		0.0000 USD	Bid
3	Construction work and site management, civil works	LO	1.0000	1.0000		0.0000 USD	Bid

iii) In the next window press **Enter Price Components**:

Line Sequence Number: 1 of 3 Go To Line: Previous Line Next Line

Line: 1 Response Required: No

Construction work and site management, civil works

Category: Construction

[View/Add Question Comments and Attachments](#)

Exact request quantity required.

Unit of Measure: Lot

Qty Requested: 1.0000

Your Max Bid Quantity: 1.0000

Max Quantity: 1.0000

Your Unit Bid Price:

Enter Price Components

Total Bid Price: 0.0000 USD

Reserve Price: No

Shipping Information

Ship Quantity	Due Date	Ship To Location	Ship Via	Freight Terms
1.0000	30/05/2017	MDA10	View	Delivered at Place

Item Specification

iv) In the next window introduce the **Total Price of Works (A)** in Line 1 as specified in the **Lot Price Schedule** and the **Present Value of Fuel for 10 years (B)** in Line 2, then press OK button. The Present Value of Fuel shall be calculated by subtracting the Total Price of Works (A) from the **Total Life-Cycle Cost for the Lot (C)**. Bidders must pay attention to the specification of Lot in the Component item description.

Price Component Breakouts

Line: 1 Your Bid Unit of Measure Lot

Construction work and site management, civil works

Component	Unit of Measure	Unit Price	Component Quantity	Component price
Price of Works <u>Lot 1</u>	Lot	A 30000.00000	1.000000	30000.000000
Present Value of Fuel for 10 years <u>Lot 1</u>	Lot	B 298182.20000	1.000000	298182.200000

OK Cancel

Total Price: 328182.200000 **C**

- v) In the line details window access the **View/Add Question Comments and Attachments**.

Line Sequence Number: 1 of 3 Go To Line: Previous Line Next Line

Line: 1 Response Required: No

Construction work and site management, civil works

Category: Construction

[View/Add Question Comments and Attachments](#)

Exact request quantity required.

Unit of Measure: Lot

Qty Requested: 1.0000

Your Max Bid Quantity: 1.0000

Max Quantity: 1.0000

Your Unit Bid Price: 328182.200000

[Enter Price Components](#)

Total Bid Price: 328,182.2000 USD

Reserve Price: No

Shipping Information

Ship Quantity	Due Date	Ship To Location	Ship Via	Freight Terms
1.0000	30/05/2017	MDA10	View	Delivered at Place

Item Specification

- vi) In the Line Comments and Attachments window press the **Upload** button. In the pop-up window press the **Browse** button and select the Lot Price Schedule file from the computer, then hit the **Upload** button.

Line Comments and Attachments

Event ID: 0000001320 Line: 1

Construction work and site management, civil works

Attachments

Add New Attachments

Attached File	Attachment Description	Upload	View
		Upload	View

[Add New Attachments](#) [Delete](#)

File Attachment

[Help](#)

[Browse...](#)

[Upload](#) [Cancel](#)

- vii) After uploading the Lot Price Schedule file, add the BOQ spreadsheet files for all the sites under the respective Lot by pressing the **Add New Attachments** button and upload procedure described in the previous step. Once finished, press OK.

Line Comments and Attachments

Event ID: 0000001320 Line: 1

Construction work and site management, civil works

Attachments

Attached File	Attachment Description	Upload	View		
Lot_Price_Schedule_Lot_1.docx	Lot 1 Price Schedule	Upload		Add New Attachments	Delete
1.1_Timova_BOQ_EN.xlsx		Upload		Add New Attachments	Delete
1.2_Unguri_BOQ_EN.xlsx		Upload		Add New Attachments	Delete
1.3_Ciuciulea_BOQ_EN.xlsx		Upload		Add New Attachments	Delete

Comments

Add New Comments

OK Cancel

- viii) Press **Save for Later** to save the progress then press the **Start Page** button.

Save for Later Start Page Validate Entries

Line Sequence Number: 1 of 3 Go To Line: Previous Line Next Line

Line: 1 Response Required: No

Construction work and site management, civil works

Category: Construction

[View/Add Question Comments and Attachments](#)

Exact request quantity required.

Unit of Measure: Lot

Qty Requested: 1.0000

Your Max Bid Quantity: 1.0000

Max Quantity: 1.0000

Your Unit Bid Price: 328182.200000

[Enter Price Components](#)

Total Bid Price: 328,182.2000 USD

Reserve Price: No

Shipping Information

Ship Quantity	Due Date	Ship To Location	Ship Via	Freight Terms
1.0000	30/05/2017	MDA10	View	Delivered at Place

Item Specification

ix) From the Start Page, continue the steps described above to upload the price schedules for the next Lots:

Step 2: Enter Line Bid Responses

This event contains one or more individual lines that await your bid response. Some or all lines may require your bid in order for consideration by the Event Administrator.

Lines in This Event: 3

Your Total Line Pricing: 328,182.2000 USD

[Hide Line Detail](#)

★ Bid Required Line Comments/Files

Previous Lines 1-3 of 3 Next Lines

Line	Description	Unit	Requested Quantity	Your Bid Quantity	Your Unit Bid Price	Your Total Bid Price	
1	Construction work and site management, civil works	LO	1.0000	1.0000	328182.200000	328,182.2000 USD	Bid
2	Construction work and site management, civil works	LO	1.0000	1.0000		0.0000 USD	Bid
3	Construction work and site management, civil works	LO	1.0000	1.0000		0.0000 USD	Bid

THIS IS NOT A COMPLETE GUIDE ON THE SUBMISSION OF THE BID. THIS SECTION ONLY COVERS THE KEY ASPECTS CONCERNING THE WAY TO SPECIFY THE PRICE OF WORKS AND THE LIFE-CYCLE COST IN THE BID. FOR MORE DETAILS ON THE BID SUBMISSION, BIDDERS SHOULD FOLLOW THE INSTRUCTIONS PUBLISHED ON THE TENDER'S WEBPAGE:

<http://www.undp.md/tenders//tnddetails2/1555/>

4. Questions and answers:

Answers to inquires received by email:

Q: We are interested in submitting a bid to provide services listed. However, we will be unable to attend the Pre-bid conference. Please advise if attendance is required, and/or a prerequisite for acceptance of our bid?

A: It is NOT mandatory to participate in the pre-bidding meeting to submit a bid. A bidder may participate in the tender even if it did not attend the pre-bidding session.

Q: Which thermal capacity shall be installed on each site of each of the Lots? Also: Which temperature levels are required?

A: The thermal capacity that is to be installed on each site can be determined from the design documents and perhaps easier from the BOQs of each site. Below is a summary of boiler plants' capacities:

Lot	ITB17/01555	Boilers Quantity	Boiler output each (kW)	Total boiler plant output (kW)
1	Lot 1 Site 1	1	150	250
		1	100	
	Lot 1 Site 2	2	150	300
	Lot 1 Site 3	2	78	156
	Lot 1 Site 4	2	125	250
2	Lot 2 Site 1	2	48	96
	Lot 2 Site 2	2	250	500
	Lot 2 Site 3	2	68	136
	Lot 2 Site 4	2	68	136
	Lot 2 Site 5	2	68	136
3	Lot 3 Site 1	2	125	250
	Lot 3 Site 2	1	175	175
	Lot 3 Site 3	1	125	125
	Lot 3 Site 4	1	48	48
	Lot 3 Site 5	1	36	36
4	Lot 4 Site 1	2	125	250
	Lot 4 Site 2	2	90	180
	Lot 4 Site 3	2	68	136
	Lot 4 Site 4	1	150	250
		1	100	
	Lot 4 Site 5	2	42	84

Concerning the required temperature levels - the boiler plants that will be installed are meant for heating of social buildings in Moldova during the winter season (schools, kindergartens, etc.), therefore the boilers should provide sufficient heat for these buildings. As a general requirement the set minimum operating temperature of the boiler is of 85⁰ C (eighty five). As concerns the solar collectors, these are meant for domestic hot-water