

**Responses to the Requests for Clarifications Received from the Potential Offerors under RFQ
UNDP/Projects/197/2017 for the for the supply and delivery of boiler plant (boiler unit and auxiliary
equipment) and performance of associated services (installation supervision, start-up and adjustment
works, commissioning and training)**

1. Question: Is it possible to get the tender document in MS Word for the convenience of editing (conversion produces incorrect results)?

Answer: Annexes to be completed by the Offerors in MS Word are posted and can be downloaded by using the same link as the tender document (<http://www.by.undp.org/content/belarus/ru/home/operations/procurement/rfq-197-2017.html> - in Russian, <http://www.by.undp.org/content/belarus/en/home/operations/procurement/RFQ-197-2017.html> - in English).

2. Question: What are the requirements to the equipment as regards emission of dust and flue gases (they were not found in the document and specifications)? Is it possible to be guided by the general norms and requirements for the region where equipment is to be installed?

Answer: The equipment requirements for the emission of dust and flue gases are specified in the State Standard of the Republic of Belarus STB 1626.2-2006 "Biomass plant boilers. Emission limits for pollutants".

3. Question: Is any preferential type of fuel from the list? Are there characteristics of the fuel?

Answer: The main type of fuel (i. 1.7 of Technical Specifications of Annex 1) is crushed/chipped waste wood being granulated up to 100mm, with high moisture content and ash content. Fuel characteristics are indicated in the Technical Specifications of Annex 1.

4. Question: What's the temperature of the returned water to boiler?

Answer: The temperature of the returned water to boiler depends on the boiler operation mode and namely on the boiler exit water temperature, water discharge rate. The difference between the temperatures of boiler exit water temperature and the returned water to boiler is to be recommended by the manufacturer of the boiler unit with the aim to have the maximum efficiency of the equipment.

5. Question: Should the manufacturing follow the ASME or any other standard?

Answer: The manufacturer may follow ASME as well as other standard(s), if in line with the tender document requirements and specifications (for instance requirement of item 5.11 of Annex 1).

6. Question: Confirm heat output of 17,20,000 kcal/hr hot water at 110 C & working pressure 6 kgs/cm sq.

Answer: Heat output of 1,720,000 kcal/hr hot water at 110 C & working pressure 6 kgs/cm sq is confirmed.

7. Question: Clarify heat pipe boiler & Worm type ash removal.

Answer: Item 1.1.1 of RFQ Annex 1 "System of ash removal" is revised as follows "System of ash removal from furnace: Mechanized" (ref. Supplemental information to RFQ posted at the same links as the RFQ document).

Hot water heat-pipe boiler is a part of an autonomously functioning boiler plant intended for the burning of chipped waste wood to produce thermal energy.

8. Question: Boiler efficiency will be 75 %. Kindly confirm your acceptance.

Answer: The requirement for the boiler unit efficiency is indicated under item 1.3. of Technical Specifications, Annex 1 (not less than 84%); technical evaluation of the offered equipment will be conducted after the deadline of the receipt of quotations under the RFQ and technical responsiveness of submitted offers will be determined during technical evaluation and not earlier. An Offeror should determine whether to submit its quotation or otherwise on his own.

9. Question: For initial heating do you want pilot burner with gas or diesel firing?

Answer: The boiler unit is to be equipped with the automatic ignition system using gas or liquid fuel (furnace oil, domestic fuel, solar oil) as indicated under item 1.7.4. of Technical Specifications, Annex 1.

10. Question: Civil work for the complete system to be clarified.

Answer: Preparation of the engineering design of the facility, preparation of the boiler room and complete construction works required for the installation of the equipment (construction of foundations, erection of the fuel storage bunker) before commencement of assembly and installation works and other works and services as indicated under item 5.7. of Technical Specifications, Annex 1 pertain to the scope of activities to be performed by the End-user (Purchaser) at its cost.

11. Question: Why water cooling system is required.

Answer: Water-cooling system is to ensure fire safety (to prevent fires). The system is a gate (valve) between fuel supply and furnace. The loss of heat for drying of fuel is compensated by the water-cooling gate (valve).

12. Question: Clarify spark suppression system & filtration 99 % efficiency.

Answer: Spark suppression system is to ensure fire safety of the facility (prevent sparks flying outside the boiler unit). The filtration system is to ensure compliance with the provisions and requirements of the State standard of the Republic of Belarus STB 1626.2-2006 "Biomass plant boilers. Emission limits for pollutants" (ref. Minutes of the Pre-bid Conference, i.17 posted at the same links as the RFQ document).

13. Question: Chimney type & height required.

Answer: The height of the chimney shall be 20m. The chimney can be of any type which complies with the requirements of Technical Specifications of Annex 1. The chimney is a structure without stay (support) wires.

14. Question: Design code & third party inspection if any.

Answer: The manufacturer may follow any standard(s), if in line with the tender document requirements and specifications (for instance requirement of item 5.11 of Annex 1). The inspection and acceptance of equipment is specified under section "Acceptance of Goods and Services" and last section of RFQ Annex 2 Table 2.

15. Question: Confirm new boiler is required or existing boiler shall be replaced.

Answer: New boiler is required to be supplied (ref. i.5.3 of RFQ Annex 1).

16. Question: Exact application of this Boiler/hot water generator / heat exchanger / hot water heat pipe boiler.

Answer: Exact application is specified under Technical Specifications of Annex 1 functional purpose: "The autonomously functioning boiler plant is intended for the burning of chipped waste wood to produce thermal energy" and i.1.1. (hot water heat pipe boiler).

17. Question: Please confirm this is the boiler requirement or hot water generator requirement?

Answer: The boiler plant producing thermal energy (hot water).

18. Question: Please confirm this requirement is Boiler, Hot water generator or Heat exchanger and also confirm that the exact application.

Answer: The exact application is specified under Technical Specifications of Annex 1 functional purpose: "The autonomously functioning boiler plant is intended for the burning of chipped waste wood to produce thermal energy" and i.1.1. (hot water heat pipe boiler). The boiler plant produces thermal energy (hot water).

19. Question: Please specify the size of crushed /chipped wood waste used as a fuel, if you are using logs then it would need Chain Conveyor for convey of wood logs to the furnace.

Answer: The size of fuel particles is indicated under i. 1.7.3 of RFQ Annex 1 (from 0.1 to 100mm), the type of fuel is specified under i.1.7; whole logs will not be used as a fuel.

20. Question: Please confirm that initial heating do you want pilot burner with gas or diesel operated.

Answer: The boiler unit is to be equipped with the automatic ignition system using gas or liquid fuel (furnace oil, domestic fuel, solar oil) as indicated under item 1.7.4. of Technical Specifications, Annex 1.

21. Question: Please Clarify the Technical Specification point No. 3.3 "System of stabilization of the set mode" what exactly required?

Answer: It is required that the automatics will regulate/adjust all requisite parameters of boiler unit operation in response to changes of any one parameter (for instance output or fuel moisture content).

22. Question: Please clarify the Technical Specification point No. 3.5 "Automatic ignition, functioning, stop of boiler unit, output setting, self-regulation of work as per the current parameter" this is not possible to do in a wood fired boiler. And also confirm that what is the meaning of AVAILABLE.

Answer: All functions listed under item 3.5. of RFQ Annex 1 are expected to be available in the offered boiler.

23. Question: Please clarify the Technical Specification point No.: 3.7 "Automatic Adjustment of the boiler unit depending on fuel quality and moisture content".

Answer: At any set output value the boiler unit is to self-adjust all requisite parameters depending on crushed wood/wood chips moisture content and quality (calorific value).

24. Question: Please clarify the Technical Specification point No. 4.1 "Fuel gas filtration system" what exactly needed?

Answer: The flue gas filtration system is to ensure compliance with the provisions and requirements of the State standard of the Republic of Belarus STB 1626.2-2006 "Biomass plant boilers. Emission limits for pollutants" (ref. Minutes of the Pre-bid Conference, i.17 posted at the same links as the RFQ document).

25. Question: In the Technical Specifications the requirements to the type of ignition fuel are specified under item 1.7.4: gas or liquid fuel (furnace oil, domestic fuel, solar oil).

You are kindly requested to add to this item "firewood" as fuel since solid fuel boilers due to their technical end design characteristics are not recommended for ignition by other type of ignition fuel as it may cause damage to the boiler equipment.

Answer: it is not possible to make ignition by using firewood in the automatic mode and therefore the provisions of item 1.7.4. of Annex 1, RFQ UNDP/Projects/197/2017 remain unchanged.

26. Question: You are kindly requested to inform whether an Offeror must have the SRO certificate/license which permits execution of any specific type or types of works related to safety of projects/facilities of capital construction.

Answer: The Technical Specifications provide that an Offeror is to perform installation supervision which does not require licensing. Installation and construction works will be executed by the specialized organization, engaged by the Purchaser (End-user) at its own cost and having the required license for the performance of the said works.

27. Question: The deadline for the submission of offers is 11 April, 2017 before 17.00 hrs. Minsk time. Our organization has an intention to participate in this tender you are kindly requested to consider extension of the deadline for the submission of offers in order prepare technical and other documents of the offer accurately and in detail.

Answer: The deadline for the submission of offers under RFQ UNDP/Projects/197/2017 is extended up to 17.00 local (Minsk) time on or before 21 April, 2017 as per the Supplemental Information to RFQ UNDP/Projects/197/2017 (the document can be downloaded from: <http://www.by.undp.org/content/belarus/ru/home/operations/procurement/rfq-197-2017.html>).

28. Question: There is one additional question regarding maximal size of installed equipment... . In the course of the installation site visit it was noted, and also seen in the layouts of the room, that more space is available than the maximal geometric dimensions indicated in the documents (6m x 9.5m x 5.8m). Is there any reasons for such dimensions and is it possible to proceed from the dimensions indicated in the layout of the ground floor (axes 7-9), attached to the documents, and slightly exceed maximal geometric dimensions of the equipment (being within the permissible limits of the room)?

Answer: The allowed dimensions arise from the need to have free space in the boiler room to perform maintenance and repairs and also to have passage for the personnel. Provisions and wording of item "External dimensions of the equipment to be installed" of Annex 1 remain unchanged; the decision on acceptability of insignificant excess of geometric dimensions specified in the item provided that the installed equipment matches the dimensions and space of the premises indicated in the layouts of Annex 6 with due consideration of required free space, will be taken during technical evaluation of the submitted offer.

12 April, 2017