



INVITATION TO BID (ITB)

ITB22/02561: FPI/Technical training equipment for educational institutions that train specialists in the energy field

Project: FPI Programme on "Addressing the impacts of the energy crisis in the Republic of Moldova: Initiating solutions toward energy security and energy poverty"

Country: Moldova, Republic of

SECTION 1: LETTER OF INVITATION

United Nations Development Programme, hereinafter referred to as UNDP, through **FPI Programme on "Addressing the impacts of the energy crisis in the Republic of Moldova: Initiating solutions toward energy security and energy poverty"** hereby invites prospective bidders to submit a bid for **ITB22/02561: FPI/Technical training equipment for educational institutions that train specialists in the energy field** in accordance with the General Conditions of Contract and the Schedule of Requirements as set out in this Invitation to Bid (ITB).

To enable you to submit a bid, please read the following attached documents carefully.

Section 1: This Letter of Invitation

Section 2: Instructions to Bidders

Section 3: Data Sheet

Section 4: Evaluation Criteria

Section 5: Schedule of Requirements

Section 6: Conditions of Contract and Contract Forms

Section 7: Bidding Forms

- Form A: Bid Confirmation
- Form B: Checklist
- Form C: Bid Submission
- Form D: Bidder Information
- Form E: Joint Venture/Consortium/Association Information
- Form F: Eligibility and Qualification
- Form G: Technical Bid
- Form H: Price Schedule
- Form I: Bid Security

When preparing your bid, please be guided by the ITB Instructions and Data Sheet. Please note that bids must be submitted directly in the system responding to the questions and uploading required documents by the deadline for submission of bids (date and time), indicated in the online system. System will not accept submission of any bid after that date and time. It is your responsibility to ensure that your bid is submitted before the deadline. Bids received after the submission deadline outside the online portal, for whatever reason, will not be considered for evaluation.

Bids must be submitted directly in Quantum NextGenERP supplier portal following this link: <http://supplier.quantum.partneragencies.org> using the profile you may have in the portal (please log in using your username and password).

Follow the instructions in the user guide to search for the tender using search filters, namely

Negotiation ID: UNDP-MDA-00042

and subscribe to the tender in order to get notifications in case of amendments of the tender document and requirements.

In case you have never registered before, follow this link to register a profile:

https://estm.fa.em2.oraclecloud.com/fscmUI/faces/PrcPosRegisterSupplier?prcBuld=300000127715297&_adf.ctrl-state=azywmctp_1&afrLoop=6329722925931702&afrWindowMode=0&afrWindowId=null&afrFS=1

[6& afrMT=screen& afrMFW=1042& afrMFH=575& afrMFDW=1280& afrMFDH=720& afrMFC=8& afrMFCI=0& afrMFM=0& afrMFR=144& afrMFG=0& afrMFS=0& afrMFO=0](#)

Do not create a new profile if you already have one. Use the forgotten password feature in case you do not remember the password or the username from previous registration.

Should you require further clarifications on the application through the Quantum online portal, kindly contact the Procurement Unit at sc.md@undp.org. Please pay attention that the bid shall be submitted online through the Quantum system and any bid sent to the above email shall be disqualified.

Should you require further clarifications on the Invitation to Bid, Schedule of Requirements or other requirements, kindly communicate using the messaging functionality in the portal.

Deadline for Submission of Offers (Date and Time), which is visible in the online procurement system will be final. System will not accept submission of any bid after that date and time. It is the responsibility of the bidder to make sure that the bid is submitted prior to this deadline for submission.

Bidders are advised to upload bid documents and to submit their offer a day prior or well before the date and time indicated under the deadline for submission of Offers. Do not wait until last minute. If Bidder faces any issue during submitting offers at the last minutes prior to the deadline for submission, UNDP may not be able to assist on such a short notice and will not be held liable in such instance. UNDP will not accept any offer that is not submitted directly through the System.

Thank you and we look forward to receiving your bid.

UNDP Moldova

SECTION 2: INSTRUCTIONS TO BIDDERS

GENERAL	
1. Scope	<p>Bidders are invited to submit a bid for the UNDP Programme specified in Section 5: Schedule of Requirements, in accordance with this Invitation to Bid (ITB). A summary of the scope of the bid is included in Section 3: Data Sheet.</p> <p>Bidders shall adhere to all the requirements of this ITB, including any amendment made in writing by UNDP. This ITB is conducted in accordance with Policies and Procedures of UNDP which can be accessed at https://popp.undp.org/SitePages/POPPRoot.aspx.</p>
2. Interpretation of the ITB	<p>Any bid submitted will be regarded as an offer by the bidder and does not constitute or imply the acceptance of the bid by UNDP. UNDP is under no obligation to award a contract to any bidder as a result of this ITB.</p>
3. Supplier Code of Conduct	<p>All bidders must read the United Nations Supplier Code of Conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN. The Code of Conduct, which includes principles on labour, human rights, environment and ethical conduct may be found at: https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct</p> <p>Moreover, suppliers should note that certain provisions of the Code of Conduct will be binding on the supplier in the event that the supplier is awarded a contract, pursuant to the terms and conditions of any such contract.</p> <p>The bidder must acknowledge that UNDP strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices. UNDP's Anti-Fraud Policy can be found at http://www.undp.org/content/undp/en/home/operations/accountability/audit/office_of_audit_and_investigation.html#anti</p> <p>In pursuance of this policy, UNDP:</p> <ul style="list-style-type: none"> (a) Shall reject a bid if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question; (b) Further to the UNDP's vendor sanctions policy, shall declare a vendor ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a UNDP contract.
4. Eligible bidders/Conflict of Interest	<p>Bidders shall have the legal capacity to enter into a binding contract with UNDP.</p> <p>A bidder, and all parties constituting the bidder, may have the nationality of any country with the exception of the nationalities, if any, listed in Section 3: Data Sheet. A bidder shall be deemed to have the nationality of a country if the bidder it is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country.</p> <p>All bidders found to have a conflict of interest shall be disqualified. Bidders may be considered to have a conflict of interest if they are or have been associated in the past, with a firm or any of its affiliates that have been engaged by UNDP to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods, services or works required in the present procurement process and/or are found to be in conflict for any other reason, as may be established by, or at the discretion of UNDP.</p> <p>In the event of any uncertainty in the interpretation of a potential conflict of interest, Bidders must disclose to UNDP, and seek UNDP's confirmation on whether or not such conflict exists.</p> <p>Similarly, the Bidders must disclose in their Bid their knowledge of the following:</p> <ul style="list-style-type: none"> a) If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel who are family members of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving goods and/or services under this ITB; and b) All other circumstances that could potentially lead to actual or perceived conflict of interest, collusion or unfair competition practices.

	<p>Failure to disclose such an information may result in the rejection of the Bid or Bids affected by the non-disclosure.</p> <p>The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to UNDP's further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this ITB, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Bid.</p> <p>Bidders shall not be eligible to submit a bid if at the time of bid submission:</p> <ul style="list-style-type: none"> • is included in the Ineligibility List, hosted by UNGM, that aggregates information disclosed by Agencies, Funds or Programs of the UN System; • is included in the Consolidated United Nations Security Council Sanctions List, including the UN Security Council Resolution 1267/1989 list; • is included in the World Bank Corporate Procurement Listing of Non-Responsible Vendors and World Bank Listing of Ineligible Firms and Individuals.
5. Eligible goods, works and services	<p>All goods, works and/or services to be supplied under the contract shall have their origin in any country with the exception of the countries, if any, listed in Section 3: Data Sheet, and all expenditures made under the contract will be limited to such goods, works and services.</p> <p>For purposes of this clause, "origin" means the place where the goods are mined, grown, or produced, or the place from which the related services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.</p> <p>The origin of goods, works and services is distinct from the nationality of the bidder.</p>
6. Proprietary information	<p>The ITB documents and any specifications, plans, drawings, patterns, samples or information issued or furnished by UNDP are issued solely for the purpose of enabling a bid to be completed and may not be used for any other purpose. The ITB documents and any additional information provided to bidders shall remain the property of UNDP. All documents which may form part of the bid will become the property of UNDP, who will not be required to return them to your firm.</p>
7. Publicity	<p>During the ITB process, a bidder is not permitted to create any publicity in connection with the ITB.</p>
SOLICITATION DOCUMENTS	
8. Clarification of solicitation documents	<p>Bidders may request clarifications on any of the ITB documents no later than the date indicated in Section 3: Data Sheet. Any request for clarification must be sent in writing in the manner indicated in Section 3: Data Sheet. Explanations or interpretations provided by personnel other than the named contact person will not be considered binding or official.</p> <p>UNDP will provide the responses to clarifications through the method specified in Section 3: Data Sheet.</p> <p>UNDP shall endeavour to provide responses to clarifications in an expeditious manner, but any delay in such response shall not cause an obligation on the part of UNDP to extend the submission date of the bids, unless UNDP deems that such an extension is justified and necessary.</p>
9. Amendment of solicitation documents	<p>At any time prior to the deadline of bid submission, UNDP may for any reason, such as in response to a clarification requested by a bidder, modify the ITB in the form of an amendment to the ITB. Amendments will be made available to all prospective bidders.</p> <p>If the amendment is substantial, UNDP may extend the Deadline for submission of bid to give the bidders reasonable time to incorporate the amendment into their bids.</p>
PREPARATION OF BIDS	
10. Cost of preparation of bid	<p>The bidder shall bear all costs related to the preparation and/or submission of the bid, regardless of whether its bid is selected or not. UNDP shall not be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process.</p>

11. Language	The bid, as well as any and all related correspondence exchanged by the bidder and UNDP, shall be written in the language(s) specified in Section 3: Data Sheet.
12. Documents comprising the bid	<p>The bid shall comprise of the following documents and related forms which details are provided in Section 3: Data Sheet:</p> <ul style="list-style-type: none"> a) Documents establishing the eligibility and qualifications of the bidder; b) Technical bid c) Price Schedule d) Bid Security (if required) e) Advance Payment Guarantee (if required) f) Performance Security (if required) g) Any attachments and/or appendices to the bid.
13. Documents establishing eligibility and qualifications of the bidder	The bidder shall furnish documentary evidence of its status as an eligible and qualified vendor, using the Forms provided in Section 7 and providing the documents required in those forms. In order to award a contract to a bidder, its qualifications must be documented to UNDP's satisfaction.
14. Technical bid	The bidder is required to submit a technical bid using the Form provided in Section 7 and taking into consideration the requirements in the ITB.
15. Price Schedule	<p>The Price Schedule shall be prepared using the Form provided in Section 7 and taking into consideration the requirements in the ITB.</p> <p>The prices and discounts quoted by the bidder shall conform to the requirements specified below.</p> <ul style="list-style-type: none"> • All items and lots (if applicable) must be listed and priced separately. • The price to be quoted shall be the total price of the bid, excluding any discounts offered. • The bidder shall quote any unconditional discounts and indicate the method for their application. • The INCOTERM shall be governed by the rules prescribed in the 2020 edition of INCOTERMS, published by The International Chamber of Commerce. The INCOTERM rules and place of destination is specified in Section 5: Schedule of Requirements. • Prices quoted by the bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in Section 3: Data Sheet. A bid submitted with an adjustable price shall be treated as non-compliant and shall be rejected. However, if in accordance with Section 3: Data Sheet, prices quoted by the bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero. • If indicated in Section 3: Data Sheet that bids are being invited for individual contracts (lots) and unless otherwise indicated in Section 3: Data Sheet, prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer any price reduction (discount) for the award of more than one Lot shall specify the applicable price reduction.
16. Bid currencies	<p>All prices shall be quoted in the currency or currencies indicated in Section 3: Data Sheet. Where bids are quoted in different currencies, for the purposes of comparison of all bids:</p> <ul style="list-style-type: none"> • UNDP will convert the currency quoted in the bid into the UNDP preferred currency, in accordance with the prevailing UN Operational Rate of Exchange on UNDP; and • In the event that UNDP selects a bid for award that is quoted in a currency different from the preferred currency in Section 3: Data Sheet, UNDP shall reserve the right to award the contract in the currency of UNDP's preference, using the conversion method specified above.
17. Duties and taxes	Article II, Section 7, of the Convention on the Privileges and Immunities provides, inter alia, that the United Nations, including UNDP as a subsidiary organ, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs restrictions, duties, and charges of a similar nature in respect of articles imported or exported for its official use. All bids shall be

	submitted net of any direct taxes and any other taxes and duties, unless otherwise specified in Section 3: Data Sheet.
18. Bid validity period	<p>Bids shall remain valid for the period specified in Section 3: Data Sheet, commencing on the deadline for submission of bids. A bid valid for a shorter period may be rejected by UNDP and rendered non-responsive.</p> <p>During the bid validity period, the bidder shall maintain its original bid without any change, including the availability of the key personnel, the proposed rates and the total price.</p> <p>In exceptional circumstances, prior to the expiration of the bid validity period, UNDP may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing, and shall be considered integral to the bid.</p> <p>If the bidder agrees to extend the validity of its bid, it shall be done without any change to the original bid, but will be required to extend the validity of the bid security, if required, for the period of the extension, and in compliance with Article 19 (Bid security) in all respects.</p> <p>The bidder has the right to refuse to extend the validity of its bid without forfeiting the bid security, if required, in which case, the bid shall not be further evaluated.</p>
19. Bid Security	<p>A bid security, if required by Section 3: Data Sheet, shall be provided in the amount and form indicated in the Section 3: Data Sheet. The bid security shall be valid for a minimum of thirty (30) days after the final date of validity of the bid.</p> <p>The bid security shall be included along with the bid. If a bid security is required by the ITB but is not found in the bid, the offer shall be rejected.</p> <p>If the bid security amount or its validity period is found to be less than is required by UNDP, UNDP shall reject the bid.</p> <p>In the event an electronic submission is allowed in Section 3: Data Sheet, bidders shall include a copy of the bid security in their bid and the original of the bid security must be sent via courier or hand delivery as per the instructions in Section 3: Data Sheet.</p> <p>Unsuccessful bidders' bid securities will be discharged/returned as promptly as possible but no later than thirty (30) days after the expiration of the period of bid validity prescribed by UNDP pursuant to Article 18 (Bid Validity Period).</p> <p>The bid security may be forfeited by UNDP, and the bid rejected, in the event of any, or combination, of the following conditions:</p> <ul style="list-style-type: none"> • If the bidder withdraws its offer during the period of the bid validity specified in Section 3: Data Sheet, or; • In the event the successful bidder fails: <ul style="list-style-type: none"> ○ to sign the Contract after UNDP has issued an award; or ○ to furnish the Performance Security, insurances, or other documents that UNDP may require as a condition precedent to the effectivity of the contract that may be awarded to the bidder.
20. Joint Venture, Consortium or Association	<p>If the bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for bid, each such legal entity will confirm in their joint bid that:</p> <ul style="list-style-type: none"> • they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, and this will be evidenced by a duly notarised Agreement among the legal entities, which will be submitted along with the bid; and • if they are awarded the contract, the contract shall be entered into by and between UNDP and the designated lead entity, who will be acting for and on behalf of all the member entities comprising the joint venture. <p>After the deadline for submission of bid, the lead entity identified to represent the JV, Consortium or Association shall not be altered without the prior written consent of UNDP.</p>

	<p>If a JV, Consortium or Association's bid is the bid selected for award, UNDP will award the contract to the joint venture, in the name of its designated lead entity. The lead entity will sign the contract for and on behalf of all other member entities.</p> <p>The lead entity and the member entities of the JV, Consortium or Association shall abide by the provisions of Article 21 (Only one Bid) herein in respect of submitting only one bid.</p> <p>The description of the organization of the JV, Consortium or Association must clearly define the expected role of each of the entities in the joint venture in delivering the requirements of the ITB, both in the bid and the JV, Consortium or Association Agreement. All entities that comprise the JV, Consortium or Association shall be subject to the eligibility and qualification assessment by UNDP.</p> <p>A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:</p> <ul style="list-style-type: none"> • Those that were undertaken together by the JV, Consortium or Association; and • Those that were undertaken by the individual entities of the JV, Consortium or Association. <p>Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the JV, Consortium or Association or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.</p> <p>JV, Consortium or Associations are encouraged for high value, multi-sectoral requirements when the spectrum of expertise and resources required may not be available within one firm.</p>
21. Only one bid	<p>The bidder (including the individual members of any Joint Venture) shall submit only one bid, either in its own name or as part of a Joint Venture.</p> <p>Bids submitted by two (2) or more bidders shall all be rejected if they are found to have any of the following:</p> <ul style="list-style-type: none"> • they have at least one controlling partner, director or shareholder in common; or • any one of them receive or have received any direct or indirect subsidy from the other/s; or • they have the same legal representative for purposes of this ITB; or • they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the bid of another bidder regarding this ITB process; • they are subcontractors to each other's bid, or a subcontractor to one bid also submits another bid under its name as lead bidder; or some key personnel proposed to be in the team of one bidder participates in more than one bid received for this ITB process. This condition relating to the personnel, does not apply to subcontractors being included in more than one bid.
22. Alternative bids	<p>Unless otherwise specified in Section 3: Data Sheet, alternative bids shall not be considered. If submission of alternative bid is allowed in Section 3: Data Sheet, a bidder may submit an alternative bid, but only if it also submits a bid conforming to the ITB requirements. Where the conditions for its acceptance are met, or justifications are clearly established, UNDP reserves the right to award a contract based on an alternative bid.</p> <p>If multiple/alternative bids are being submitted, they must be clearly marked as "Main Bid" and "Alternative Bid". If no indication is provided as to which bid is the main bid and which is/are the alternative bid(s), then all bids will be rejected.</p>
23. Pre-bid conference	<p>When appropriate, a pre-bid conference will be conducted at the date, time and location and according to any instructions specified in Section 3: Data Sheet.</p> <p>If it is stated in Section 3: Data Sheet that the pre-bid conference is mandatory, a bidder which does not attend the pre-bid conference shall become ineligible to submit a bid under this ITB.</p> <p>If it is stated in Section 3: Data Sheet that the pre-bid conference is not mandatory, non-attendance shall not result in disqualification of an interested bidder.</p>

	<p>UNDP will not issue any formal answers to questions from bidders regarding the ITB or bid process during the pre-bid conference. All questions shall be submitted in accordance with Article 41 (Clarification of Bids).</p> <p>The pre-bid conference shall be conducted for the purpose of providing background information only. Without limiting Article 26 (Bidders Responsibility) bidders shall not rely upon any information, statement or representation made at the pre-bid conference unless that information, statement or representation is confirmed by UNDP in writing.</p> <p>Minutes of the pre-bid conference will be disseminated as specified in Section 3: Data Sheet. No verbal statement made during the conference shall modify the terms and conditions of the ITB, unless specifically incorporated in the minutes of the bidder's conference or issued/posted as an amendment to ITB.</p>
24. Site inspection	<p>When appropriate, a site inspection will be conducted at the date, time and location and according to any instructions specified in Section 3: Data Sheet.</p> <p>If it is stated in Section 3: Data Sheet that the site inspection is mandatory, a bidder which does not attend the site inspection shall become ineligible to submit a bid under this ITB.</p> <p>If it is stated in Section 3: Data Sheet that the site inspection is not mandatory, non-attendance, shall not result in disqualification of an interested bidder.</p> <p>Bidders participating in a site inspection shall be responsible for making and obtaining any visa arrangements that may be required for the bidders to participate in a site inspection.</p> <p>Prior to attending a site inspection, bidders shall execute an indemnity and a waiver releasing UNDP in respect of any liability that may arise from:</p> <ul style="list-style-type: none"> (i) loss of or damage to any real or personal property; (ii) personal injury, disease or illness to, or death of, any person; (iii) financial loss or expense, arising out of the carrying out of that site inspection; and (iv) transportation by UNDP to the site (if provided) as a result of any accidents or malicious acts by third parties. <p>Click or tap here to enter text. will not issue any formal answers to questions from bidders regarding the ITB or bid process during a site inspection. All questions shall be submitted in accordance with Article 8 (Clarification of solicitation documents).</p> <p>A site inspection will be conducted for the purpose of providing background information only. Without limiting Article 26 (Bidders Responsibility), bidders shall not rely upon any information, statement or representation made at a site inspection unless that information, statement or representation is confirmed by UNDP in writing.</p>
25. Errors or omissions	<p>Bidders shall immediately notify UNDP in writing of any ambiguities, errors, omissions, discrepancies, inconsistencies or other faults in any part of the ITB, with full details of those ambiguities, errors, omissions, discrepancies, inconsistencies or other faults.</p> <p>Bidders shall not benefit from such ambiguities, errors, omissions, discrepancies, inconsistencies or other faults.</p>
26. Bidders responsibility to inform themselves	<p>Bidders shall be responsible for informing themselves in preparing their bid. In this regard, bidders shall ensure that they:</p> <ul style="list-style-type: none"> • examine and fully inform themselves in relation to all aspects of the ITB, including the Contract and all other documents included or referred to in this ITB; • review the ITB to ensure that they have a complete copy of all documents; • obtain and examine all other information relevant to the project and the scope of the requirements available on reasonable enquiry; • verify all relevant representations, statements and information, including those contained or referred to in the ITB or made orally during any clarification meeting or site inspection or any discussion with UNDP, its employees or agents; • attend any Pre-bid conference or site inspection if it is mandatory under this ITB;

	<ul style="list-style-type: none"> fully inform and satisfy themselves as to requirements of any relevant authorities and laws that apply, or may in the future apply, to the supply of the goods, works and/or services; and form their own assessment of the nature and extent of the goods, works and /or services required as included in Section 5: Schedule of Requirements and properly account for all requirements in their bid. <p>Bidders acknowledge that UNDP, its directors, employees and agents make no representations or warranties (express or implied) as to the accuracy, currency or completeness of this ITB or any other information provided to the bidders.</p>
27. No material change(s) in circumstances	<p>The bidder shall inform UNDP of any change(s) of circumstances arising during the ITB process, including but not limited to:</p> <ul style="list-style-type: none"> a change affecting any declaration, accreditation, license or approval; major re-organisational changes, company re-structuring, a take-over, buy-out or similar event(s) affecting the operation and/or financing of the bidder or its major sub-contractors; a change to any information on which UNDP may rely in assessing bids.
SUBMISSION AND OPENING OF BIDS	
28. Instruction for bid submission	<p>The bidder shall submit a duly signed and complete bid comprising the documents and forms in accordance with requirements in Section 3: Data Sheet. The Price Schedule shall be submitted together with the Technical Bid. The bid shall be delivered according to the method specified in Section 3: Data Sheet.</p> <p>The bid shall be signed by the bidder or person(s) duly authorized to commit the bidder. The authorization shall be communicated through a document evidencing such authorization issued by the legal representative of the bidding entity, or, if requested, a Power of Attorney, accompanying the bid.</p> <p>Bidders must be aware that the mere act of submission of a bid, in and of itself, implies that the bidder fully accepts the UNDP General Conditions of Contract.</p> <p>Electronic submission through the portal, if allowed as specified in the BDS, shall be governed as follows:</p> <ul style="list-style-type: none"> Electronic files that form part of the Bid must be in accordance with the format and requirements indicated in BDS; Documents which are required to be in original form (e.g. Bid Security, etc.) must be sent via courier or hand delivered as per the instructions in BDS.
29. Deadline for bid submission	<p>Complete bids must be received by UNDP in the manner, and no later than the date and time, specified in Section 3: Data Sheet. If any doubt exists as to the time zone in which the Bid should be submitted, refer to http://www.timeanddate.com/worldclock/. It shall be the sole responsibility of the bidders to ensure that their bid is received by the closing date and time. UNDP shall accept no responsibility for bids that arrive late due to the courier company or any technical issues and shall only recognise the actual date and time that the bid was received by UNDP.</p> <p>UNDP may, at its discretion, extend this deadline for the submission of bids by amending the solicitation documents in accordance with Article 9 Amendment of solicitation documents. In this case, all rights and obligations of UNDP and bidders subject to the previous deadline will thereafter be subject to the new deadline as extended.</p>
30. Withdrawal, substitution and modification of bids	<p>A bidder may withdraw, substitute or modify its bid after it has been submitted at any time prior to the deadline for submission by sending a written notice to UNDP, duly signed by an authorized representative and shall include a copy of the authorization (or a Power of Attorney). The corresponding substitution or modification of the bid, if any, must accompany the respective written notice. All notices must be submitted in the same manner as specified for submission of bids, by clearly marking them as "WITHDRAWAL", "SUBSTITUTION" OR "MODIFICATION".</p> <p>However, after the deadline for bid submission, the bids shall remain valid and open for acceptance by UNDP for the entire bid validity period, as may be extended.</p>

	Quantum: A Bidder may modify its Bid by revising the Bid directly in the system. It is the responsibility of the Bidder to properly follow the system instructions, duly revise and submit a modification of the Bid as needed. Detailed instructions on how to revise a Bid directly in the system are provided in the Bidder User Guide.
31. Storage of bids	Bidders are encouraged to submit their bid in good time to avoid last minute challenges. Bids submitted in the supplier portal are kept confidential and secure by the system and no one in the organization has access to such information until deadline has passed and bids have been opened.
32. Bid opening	Once deadline has passed, bids will be opened for evaluation as per the UNDP evaluation procedures. If Public Bid Opening is provisioned, a Public Bid Opening report will be sent automatically by the system to all bidders who have posted a successful bid indicating names of the companies and their total bid price.
33. Late bids	<p>In exceptional circumstances, bid received outside portal within or after deadline may be accepted if it is determined that it was due to factors not reasonably foreseen by the bidder or was due to force majeure.</p> <p>Such bids received by UNDP will be destroyed unless the bidder requests that it be returned and assumes the responsibility and expenses for the re-possession of the returned bidding documents.</p>
EVALUATION OF BIDS	
34. Confidentiality	<p>Information relating to the examination, evaluation, and comparison of bids, and the recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process, even after publication of the contract award.</p> <p>Any effort by a bidder or anyone on behalf of the bidder to influence UNDP in the examination, evaluation and comparison of the bids or contract award decisions may, at UNDP's decision, result in the rejection of its bid and may subsequently be subject to the application of prevailing UNDP's vendor sanctions procedures.</p>
35. Evaluation of bids	<p>UNDP shall evaluate a bid using only the methodologies and criteria defined in this ITB. No other criteria or methodology shall be permitted.</p> <p>UNDP shall conduct the evaluation solely on the basis of the bids received according to the evaluation criteria in Section 4.</p> <p>Evaluation of bids shall be undertaken in the following steps:</p> <ol style="list-style-type: none"> Preliminary examination Evaluation of eligibility and qualification Evaluation of technical bids Evaluation of prices of bids found to be substantially compliant <p>Detailed evaluation will be focussed on the 3 - 5 lowest priced bids. Further higher priced bids shall be added for evaluation if necessary</p> <p>After completion of the evaluation, but prior to award, UNDP shall conduct a Post-qualification assessment of the bidder recommended for award (if pre-qualification was not done) as per Article 40 (Post-qualification).</p>
36. Preliminary examination	UNDP shall examine the bids to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, and whether the bids are generally in order, among other indicators that may be used at this stage. UNDP reserves the right to reject any bid at this stage.
37. Evaluation of eligibility and qualification	<p>Eligibility and Qualification of the bidder will be evaluated against the Minimum Eligibility/Qualification requirements specified in Section 4: Evaluation Criteria and in Article 4 (Eligible Bidders).</p> <p>In general terms, vendors that meet the following criteria may be considered qualified:</p> <ol style="list-style-type: none"> They are not included in the UN Security Council 1267/1989 Committee's list of terrorists and terrorist financiers, and in UNDP's ineligible vendors' list; They have a good financial standing and have access to adequate financial resources to perform

	<p>the contract and all existing commercial commitments,</p> <p>c) They have the necessary similar experience, technical expertise, production capacity, quality certifications, quality assurance procedures and other resources applicable to the supply of goods and/or services required;</p> <p>d) They are able to comply fully with the UNDP General Terms and Conditions of Contract;</p> <p>e) They do not have a consistent history of court/arbitral award decisions against the Bidder; and</p> <p>f) They have a record of timely and satisfactory performance with their clients.</p>
38. Evaluation of technical bids	<p>Technical evaluation will be conducted to establish substantial compliance, as per the criteria included in Section 4: Evaluation Criteria. When the bid varies in one or more aspect/s from the minimum technical specifications and/or delivery requirements specified in Section 5: Schedule of Requirements, the bid will not be considered substantially compliant and will not be evaluated further.</p> <p>When necessary, and if stated in the BDS, UNDP may invite technically responsive bidders for a presentation related to their technical Bids. The conditions for the presentation shall be provided in the bid document where required.</p>
39. Evaluation of prices	<p>The prices of bids found to be substantially compliant, will be compared to identify the most substantially compliant bid which represents the lowest overall costs to UNDP.</p>
40. Post-qualification/Due diligence	<p>UNDP reserves the right to undertake a post-qualification assessment, aimed at determining, to its satisfaction, the validity of the information provided by the bidder. Such exercise shall be fully documented and may include, but need not be limited to, all or any combination of the following:</p> <ul style="list-style-type: none"> a) Verification of accuracy, correctness and authenticity of information provided by the bidder; b) Validation of extent of compliance to the ITB requirements and evaluation criteria based on what has so far been found by the evaluation team; c) Inquiry and reference checking with Government entities with jurisdiction on the bidder, or with previous clients, or any other entity that may have done business with the bidder; d) Inquiry and reference checking with previous clients on the performance on on-going or completed contracts, including physical inspections of previous works, as deemed necessary; e) Physical inspection of the bidder's offices, branches or other places where business transpires, with or without notice to the bidder; f) Other means that UNDP may deem appropriate, at any stage within the selection process, prior to awarding the contract.
41. Clarification of bids	<p>UNDP may request clarification or further information in writing from the bidders at any time during the evaluation process. The bidders' responses shall not contain any changes regarding the substance or price of the bid, except to confirm the correction of arithmetic errors discovered by UNDP in the evaluation of the bids, in accordance with Instructions to Bidders Article 25 (Errors or omissions).</p> <p>UNDP may use such information in interpreting and evaluating the relevant bid but is under no obligation to take it into account.</p> <p>Any unsolicited clarification submitted by a Bidder in respect to its Bid, which is not a response to a request by UNDP, shall not be considered during the review and evaluation of the Bids.</p>
42. Responsiveness of bid	<p>UNDP's determination of a bid's responsiveness is to be based on the contents of the bid itself. A substantially responsive bid is one that conforms to all the terms, conditions, and specifications of the bidding documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:</p> <ul style="list-style-type: none"> a) affects in any substantial way the scope, quality, or performance of the goods, services and/or works specified in the contract; or b) limits in any substantial way, inconsistent with the bidding documents, UNDP's rights or the bidder's obligations under the contract; or c) if rectified would unfairly affect the competitive position of other bidders presenting

	<p>substantially responsive bids.</p> <p>If a bid is not substantially responsive, it shall be rejected by UNDP and may not subsequently be made responsive by the bidder by correction of the material deviation, reservation, or omission.</p>
43. Nonconformities, reparable errors and omission	<p>Provided that a bid is substantially responsive, UNDP may waive any non-conformities or omissions in the bid that, in the opinion of UNDP, do not constitute a material deviation. These are a matter of form and not of substance and can be corrected or waived without being prejudicial to other bidders.</p> <p>Provided that a bid is substantially responsive UNDP may request the bidder to submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the bid. Failure of the bidder to comply with the request may result in the rejection of its bid.</p> <p>For bids that have passed the preliminary examination, UNDP shall check and correct arithmetical errors as follows:</p> <ul style="list-style-type: none"> a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of UNDP there is an obvious misplacement of the decimal point in the unit price; in which case, the line item total as quoted shall govern and the unit price shall be corrected; b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail. <p>If the bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be rejected and its bid security may be forfeited.</p>
44. Right to accept any bid and to reject any or all bids	<p>UNDP reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for UNDP's action. UNDP shall not be obliged to award the contract to the lowest priced offer.</p>
45. Samples	<p>Where required as per Section 5: Schedule of Requirements, free, non-returnable samples shall be provided by the bid submission deadline for evaluation and testing by UNDP or their representative, of the item and/or the packing and packaging, prior to any award. Samples will be subject to technical review and laboratory analysis where appropriate. Samples provided to UNDP are non-returnable, unless otherwise stated. Samples should be marked with the ITB number.</p> <p>If a bidder fails to provide samples or documents requested by UNDP in a timely manner, UNDP may declare the bid unsuccessful.</p>
AWARD OF CONTRACT	
46. Award criteria	<p>In the event of a Contract award, UNDP shall award the Contract to a bidder who has been determined as eligible and qualified and whose bid has been determined to be the lowest priced, substantially compliant offer to the ITB. UNDP reserves the right to conduct negotiations with the bidder recommended for award on the content of their bid.</p>
47. Right to vary requirement at time of award	<p>At the time the Contract is awarded, UNDP reserves the right to increase or decrease the quantity of goods, works and/or services, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions</p>
48. Notification of award	<p>Prior to the expiration of the period of bid validity, UNDP will notify the successful bidder in writing by email, fax or post, that its bid has been accepted. Please note that the bidder, if not already registered at the appropriate level in UNGM, will be required to complete the vendor registration process on the UNGM prior to the signature and finalization of the contract.</p>
49. Debriefing	<p>In the event that a bidder is unsuccessful, the bidder may request a debriefing from UNDP. The purpose of the debriefing is to discuss the strengths and weaknesses of the bidder's submission, in</p>

	order to assist the bidder in improving its future bids for UNDP procurement opportunities. The content of other bids and how they compare to the bidder's submission shall not be discussed.
50. Publication of Contract Award	UNDP will publish the contract award on UNDP Procurement Notices website https://procurement-notices.undp.org/view_awards.cfm with the ITB reference number, the information of the awarded bidder company name, contract amount or LTA and the date of the contract.
51. Contract Signature	Within fifteen (15) days from the date of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to UNDP. Failure to do so may constitute sufficient grounds for the annulment of the award, and forfeiture of the Bid Security, if any, and on which event, UNDP may award the Contract to the Second highest rated or call for new Bids.
52. Contract Type and General Terms and Conditions	The types of Contract to be signed and the applicable UNDP Contract General Terms and Conditions, as specified in BDS, can be accessed at http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
53. Performance security	<p>The successful bidder, if so specified in Section 3: Data Sheet shall furnish a performance security in the amount and form specified therein, within the specified number of days after receipt of the contract from UNDP. Banks issuing performance securities must be acceptable to the UNDP comptroller, i.e. banks certified by the central bank of the country to operate as a commercial bank. UNDP shall promptly discharge the bid securities of the unsuccessful bidders pursuant to Article 19 (Bid Security). The Performance Security form is available here</p> <p>Failure of the successful bidder to submit the above-mentioned performance security or sign the contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event UNDP may award the contract to the next lowest evaluated bidder, whose offer is substantially responsive and is determined by UNDP to be qualified to perform the contract satisfactorily.</p>
54. Bank guarantee for advance payment	Except when the interests of UNDP so require, it is UNDP's standard practice not to make advance payment(s) (i.e., payments without having received any outputs). If an advance payment is allowed as per Section 3: Data Sheet, and if specified there, the bidder shall submit a Bank Guarantee in the full amount of the advance payment using this bank guarantee form . Banks issuing bank guarantees must be acceptable to the UNDP comptroller, i.e. banks certified by the central bank of the country to operate as a commercial bank.
55. Liquidated Damages	If specified in Section 3: Data Sheet, UNDP shall apply Liquidated Damages for the damages and/or risks caused to UNDP resulting from the Contractor's delays or breach of its obligations as per the Contract.
56. Bid protest	Any bidder that believes to have been unjustly treated in connection with this bid process or any contract that may be awarded as a result of such bid process may submit a complaint to UNDP. The following link provides further details regarding UNDP vendor protest procedures: http://www.undp.org/content/undp/en/home/procurement/business/protest-and-sanctions.html
57. Other Provisions	<p>In the event that the Bidder offers a lower price to the host Government (e.g. General Services Administration (GSA) of the federal government of the United States of America) for similar goods and/or services, UNDP shall be entitled to the same lower price. The UNDP General Terms and Conditions shall have precedence.</p> <p>UNDP is entitled to receive the same pricing offered by the same Contractor in contracts with the United Nations and/or its Agencies. The UNDP General Terms and Conditions shall have precedence.</p> <p>The United Nations has established restrictions on employment of (former) UN staff who have been involved in the procurement process as per bulletin ST/SGB/2006/15 http://www.un.org/en/ga/search/view_doc.asp?symbol=ST/SGB/2006/15&referer</p>

SECTION 3: DATA SHEET

The following specific data shall complement, supplement or amend the Provisions in Section 2: Instructions to Bidders. In case there is a conflict, the provisions herein shall prevail over those in Section 2: Instructions to Bidders.

Ref. Article in Section 2		Specific Instructions / Requirements
1.	Scope	<p>The reference number of this Invitation to Bid (ITB) is ITB22/02561: FPI/Technical training equipment for educational institutions that train specialists in the energy field.</p> <p>UNDP Moldova seeks to purchase technical equipment necessary for the process of continuous training of specialists in the energy field for 5 educational institutions with energy profile. The institutions that will benefit from technical equipment are:</p> <ol style="list-style-type: none"> 1) Center for Continuing Education of the Technical University of Moldova, (Chisinau) http://cfceecp.utm.md/ 2) Center of Excellence in Construction (Chisinau) http://ccc.md/instalator-instalatii-de-incalzire-si-baterii-solare/ 3) Chisinau Technological College (Chisinau) http://colegiultehnologic.md/masini-si-aparate-electrice-de-uz-casnic/ 4) Soroca Agriculture Technical College https://ipctasoroca.md/specialty/electromecanica/ 5) Balti Polytechnic College http://cpbmd.info/ <p>The scope of services and specifications of goods are further described in Section 5 of this ITB.</p>
4.	Eligible bidders	Bidders from all countries are eligible to bid.
5.	Eligible goods, works and services	Goods, works and/or services with origin in all countries are eligible in this bidding process.
8.	Clarification of solicitation documents	<p>Bidders must send their questions in the system using the messaging feature. Only in case of facing difficulties to register in the system and sending messages, bidder can write to the contact below to request support with the system:</p> <p>Focal Person: Mihai Lupu, Team Lead, Component 2, FPI Programme</p> <p>E-mail address: mihai.lupu@undp.org</p> <p>ATTENTION: BIDS SHALL NOT BE SUBMITTED TO THE ABOVE ADDRESS BUT TO THE ADDRESS FOR BID SUBMISSION AS SET OUT BELOW (see Data Sheet Article 28).</p> <p>Deadline for submitting requests for clarifications / questions:</p> <p>Date: 5 (five) days before the submission deadline Time: 18:00 Time zone: Moldova time/GMT+2</p> <p>UNDP will post the clarifications directly to the system.</p>
11.	Language	All bids, information, documents and correspondence exchanged between UNDP and the bidders in relation to this bid process shall be in English and Romanian (acceptable).
15.	Price adjustment	The price quoted by the Bidder shall not be subject to adjustment during the performance of the contract.

15.	Partial bids (lots)	<p>Bidders shall be allowed to quote prices for one or more lots identified. However, Bidders must offer 100% of the items and 100% of the quantities per item specified per lot. Evaluation will be done per lot.</p> <p>The LOTS under this Invitation to Bid are presented below and are detailed in Section 5: Schedule of Requirements:</p> <p>LOT 1 – Tools and electrical equipment for training</p> <p>LOT 2 – Measurement and verification equipment for training</p> <p>LOT 3 – Laboratory stands for training</p>
16.	Bid currencies	Prices shall be quoted in US Dollars (USD) .
17.	Duties and taxes	<p>All prices shall:</p> <p>Be exclusive of VAT and other applicable indirect taxes.</p> <p>In case of contract award to a local company, payments will be made in Moldovan Leu based on UN Operational Rate of Exchange on the day of payment:</p> <p>https://treasury.un.org/operationalrates/OperationalRates.php</p>
18.	Bid validity period	90 days
19.	Bid security	<p>In case the Bidder applies for all 3 (three) LOTS, a bid security shall be required in amount of 6,525 USD (six thousand five hundred twenty-five US Dollars 00 cents).</p> <p>The bid security will be in the same currency as stipulated in Article 16: Bid currencies.</p> <p>Acceptable forms of bid security:</p> <p><input checked="" type="checkbox"/> Bid security form template (bank guarantee) set out in Section 7: Bidding Forms</p> <p>Important Remarks:</p> <ul style="list-style-type: none"> • The Bid Security shall be valid up to 30 days after the final date of validity of bids. • The Original Copy of Bid Security documentation must be physically received by UNDP (10) ten calendar days after the deadline for submission of offers indicated in the Quantum system the latest, and a copy of full Bid Security documentation must be submitted through Quantum system as part of the online bid. If Bid security is not submitted as stipulated above, bid shall be disqualified. The address for submitting the original Bid Security documentation is as follows: <p>UNDP Moldova, #131, 31 August 1989 Street,</p> <p>MD-2012, Chisinau, Republic of Moldova</p> <p>to the attention of Procurement Unit</p>
22.	Alternative bids	Shall not be considered.
23.	Pre-bid conference	<p>Will be conducted</p> <p>Time and time zone: 11:00, Moldova time, GMT+2</p> <p>Date : 29 November 2022</p> <p>Zoom meeting URL:</p> <p>https://undp.zoom.us/j/83228571221?pwd=OWZhUzNnUVdLMHNNYVZCRGVZeD Vndz09</p> <p>Meeting ID: 832 2857 1221</p> <p>Pasword: 592937</p> <p>Before joining the meeting kindly leave your name and contact details, after which you will be allowed to join the meeting.</p>

		<p>The focal point for the arrangement is:</p> <p>Nadejda Russu, Procurement Coordinator, FPI Programme</p> <p>E-mail: nadejda.russu@undp.org</p> <p>The Pre-bid conference is:</p> <p><input checked="" type="checkbox"/> not mandatory</p> <p>Minutes of the Pre-bid conference will be disseminated by direct communication to prospective Bidders by email and posting on the website UNDP Moldova tenders, UNDP Procurement Notices and UNGM websites.</p>
24.	Site inspection	A site inspection will not be held.
28.	Instruction for bid submission	<p>Bidders must submit their bid directly in the online system.</p> <ul style="list-style-type: none"> ▪ File Format: PDF files (preferred) ▪ All files must be free of viruses and not corrupted. ▪ Documents which are required in original (e.g. bid security) should be sent to the below address with a PDF copy submitted as part of the electronic submission: <p>UNDP Moldova, #131, 31 August 1989 Street, MD-2012, Chisinau, Republic of Moldova to the attention of Procurement Unit</p> <ul style="list-style-type: none"> ▪ It is recommended that bidders organize and name the files according to the requirements and structure of the bid to facilitate their review. ▪ The bidder should receive an email acknowledging email receipt from the system.
29.	Deadline for bid submission	Deadline is indicated in the supplier portal. In case of discrepancies between the deadline indicated in the portal and deadline indicated elsewhere, the deadline in the portal will prevail. It is the responsibility of the bidder to be informed on the tender deadline.
32.	Bid opening	<input checked="" type="checkbox"/> A Public bid opening report will be sent automatically from the system to all bidders who have submitted a bid for this tender.
	Evaluation Method for the Award of Contract	Lowest priced out of technically responsive, eligible and qualified bids.
	Expected date for commencement of contract	16 January 2023
47.	Right to vary requirement at time of award	The maximum percentage by which quantities may be increased or decreased is 25%
	Contract award to one or more bidder	<p>UNDP will award a contract to:</p> <p>One or more Bidders, depending on the LOT applied:</p> <p>LOT 1 – Tools and electrical equipment for training</p> <p>LOT 2 – Measurement and verification equipment for training</p> <p>LOT 3 – Laboratory stands for training</p> <p>One Bidder can be awarded more than one LOT.</p>
50.	Type of contract to be awarded	<p>Contract for Goods and/or Services to UNDP</p> <p>See Section 6: for sample contract.</p>

		http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
50.	Conditions of contract to apply	UNDP General Terms and Conditions for Contracts See Section 6 http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
52.	Performance security	Not Required
53.	Advance payment	Not Allowed
54.	Liquidated Damages	Will be imposed as follows: Percentage of contract price per week of delay: 2.5% up to a maximum of 10% of the Contract value, after which UNDP may terminate the contract.
	Other information related to the ITB	N/A

SECTION 4: EVALUATION CRITERIA

Preliminary Examination Criteria

All criteria will be evaluated on a Pass/Fail basis and checked during Preliminary Examination.

Criteria	Documents to establish compliance
Completeness of the bid	All documents and technical documentation requested in Section 2: Instructions to Bidders Article 12 have been provided and are complete.
Bidder accepts UNDP General Conditions of Contract as specified in Section 6.	Duly signed and stamped Form C: Bid Submission has been provided.
Bid Validity	Duly signed and stamped Form C: Bid Submission has been provided.
Bid Security with compliant validity period [in case Bidder applies for three (3) LOTS]	Duly signed and stamped compliant to validity Form I: Bid Security has been provided.
Appropriate signatures	Bid Form have been duly signed and stamped.
Power of Attorney [if applicable]	Certified Letter of Appointment and/or power of attorney authorizing the representative of the Bidder to sign bids has been provided.

Eligibility and Qualification Criteria

All criteria will be evaluated on a Pass/Fail basis.

If the bid is submitted as a Joint Venture, Consortium or Association, each member should meet the minimum criteria, unless otherwise specified.

Eligibility Criteria	Documents to establish compliance
Bidder is a legally registered entity	Form D: Bidder Information
Bidder belongs to a diverse supplier group including micro, small or medium sized enterprise, women or youth owned business or other.	Form D: Bidder Information
Vendor is not suspended, nor otherwise identified as ineligible by any UN Organization, the World Bank Group or any other International Organisation in accordance with Section 2 Article 4.	Form C: Bid Submission
No conflicts of interest in accordance with Section 2 Article 4.	Form C: Bid Submission
The bidder has not declared bankruptcy, in not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against the vendor that could impair its operations in the foreseeable future	Form C: Bid Submission
Certificates and Licences: <ul style="list-style-type: none">• Duly authorized to act as Agent on behalf of the Manufacturer, or Power of Attorney, if bidder is not a manufacturer.• Official appointment as local representative, if bidder is submitting a bid on behalf of an entity located outside the country.• Patent Registration Certificates, if any of technologies submitted in the bid is patented by the bidder.• Export/Import Licenses, if applicable.	Form D: Bidder Information

Qualification Criteria	Documents to establish compliance
History of non-performing contracts ¹ : Non-performance of a contract did not occur as a result of contractor default within the last 3 years.	Form F: Eligibility and Qualification
Litigation History: No consistent history of court/arbitral award decisions against the bidder for the last 3 years.	Form F: Eligibility and Qualification
Previous Experience:	
Minimum three (3) years of relevant experience in provision of similar equipment and training services on the use of the equipment (in accordance with LOT applied) <i>(For JV/Consortium/Association, the Team Leader should meet requirement).</i>	Form F: Eligibility and Qualification
Minimum one (1) contract of similar or higher value, nature and complexity implemented over the last 3 (three) years (in accordance with LOT applied) <i>(For JV/Consortium/Association, the Team Leader should meet requirement).</i>	Form F: Eligibility and Qualification
Financial Standing:	
Liquidity: The Ratio Average Current assets / Current liabilities over the last 3 years must be equal or greater than 1. Bidder must demonstrate the current soundness of its financial standing and indicate its prospective long-term profitability.	Copy of audited financial statements for the last three years (2019-2021). Form F: Eligibility and Qualification
Turnover: Bidders should have annual sales turnover of minimum 30,000 USD in case of applying to LOT 1 30,000 USD in case of applying to LOT 2 270,000 USD in case of applying to LOT 3 for the last three years (2019-2021). <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i>	Copy of audited financial statements for the last three years. Form F: Eligibility and Qualification
Key Personnel	
The minimum personnel for each Lot required for the implementation of the assignment is: - 1 (one) Trainer with minimum 2 (two) years of experience in providing tutorial sessions for operation and maintenance of technical equipment mentioned in Section 5. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i>	Form G: Technical Bid

¹ Non-performance, as decided by UNDP, shall include all contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non-performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non-performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

Technical Evaluation Criteria

Criteria	Documents to establish compliance
Goods/services offered in the bid are substantially compliant and do not contain any material deviation(s) from the minimum required as included in Section 5: Schedule of Requirements.	Form G: Technical Bid
The bid is substantially compliant with the minimum Delivery Requirements included in Section 5: Schedule of Requirements and do not contain any material deviation(s).	Form G: Technical Bid
The bid is substantially compliant with Warranty Requirements included in Section 5: Schedule of Requirements and do not contain any material deviation(s).	Form G: Technical Bid
The bid is substantially compliant with requirements related to the availability of one authorized representative located in Moldova or neighbouring countries for technical support provision as outlined in Section 5: Schedule of Requirements and do not contain any material deviation(s).	Form G: Technical Bid
The bid is substantially compliant with Quality and/or Conformity Requirements included in Section 5: Schedule of Requirements and do not contain any material deviation(s).	Form G: Technical Bid

Evaluation of Prices

Criteria	Documents to establish compliance
Price comparison shall be based on the landed price, including transportation, insurance and the total cost of ownership (including spare parts, consumption, installation, commissioning, training, special packaging, etc., where applicable). Comparison with budget/internal estimates.	Form H: Price Schedule

SECTION 5: SCHEDULE OF REQUIREMENTS

A. Summary of Requirements

Requirements are comprised of the following Lots:

- **LOT 1 – Tools and electrical equipment for training**
- **LOT 2 – Measurement and verification equipment for training**
- **LOT 3 – Laboratory stands for training**

B. Background

Moldova is part of the EU's European Neighbourhood Policy (ENP) and in the Eastern Partnership framework, which aims at strengthening individual and regional relationships between the EU and countries in its neighbourhood. Moldova is also part of the Energy Community Treaty since 2010 and has signed the Association Agreement with EU in June 2014, including the DCFTA which entered into force in 2016. As a follow-up, Moldova is required to ensure transposition of the EU *acquis Communautaire*, which underpins the EU energy legislation on electricity, gas, oil, renewables, efficacy and environment. The country is planning to fully synchronize its electricity network with the ENTSO-E to connect to European electricity market.

The energy sector is one of the top priorities for the Government and it is addressed in Government's Plans and several policy documents, laws, and regulations. The most important are the following: the draft National Development Strategy 2030, the National Energy Strategy 2030, Law on energy, Law on electricity, Law on promoting use of energy from renewable sources, Law on natural gas, Law on energy efficiency, Law on the energy performance of buildings, Law on the labelling of products with energy impact, Law on eco-design requirements for energy-related products, etc., as well as a list of secondary legislation, meant necessary to ensure for the implementation of the primary legislation.

In accordance with the existing strategic planning documents, one of main priorities of the Government is to diversify the energy mix with more renewable energy, which is also fully in line with commitments under the EU Clean Energy for all Europeans packages. Achieving this goal will require significant investment in the medium and long term, but also the country's ability to attract and absorb the funds. The development of renewables, such as wind and solar, will also depend on improving the balancing capabilities of the Moldovan power system and its integration with neighbouring countries.

Starting with October 2021, Moldova faced significant crisis in the gas sector, which outlined the need to undertake more actions towards improving energy security of the Republic of Moldova, both in the natural gas and electricity sectors.

To enhance security of gas supply, Moldovan authorities are seeking various ways to diversify gas and electricity supply, to strengthen its energy security and enabling a transparent, fully open, and well-functioning energy market.

The acute gas supply crisis in Moldova has also been subject of discussions within the Moldova-EU Association Council meeting on October 28, 2021. The EU and Moldova stressed the importance of resilience against any potential efforts by third parties to use energy as a geopolitical lever. The Association Council recalled the importance of continued energy market reform to strengthen competition and transparency in this sector. The EU has urged Moldova to ensure that the energy sector reform demonstrates full respect of the Energy Community *acquis* and is in line with the EU Third Energy Package. The EU side confirmed its support to the objective of Moldova to synchronize its electricity network with the Continental European Network (CEN), an important step towards the integration into the EU energy system and market.

Under these circumstances, the Government of Moldova will be assisted to tackle the current energy crisis and energy poverty and addressing prioritized systemic elements in the energy sector to cope with potential future energy crisis. In partnership with EU, UNDP Moldova will therefore, support the Government of Moldova:

- To tackle the current energy crisis and energy poverty, and addressing prioritized systemic elements in the energy sector to cope with potential future energy crisis.
- To support the Government of Moldova in building its capacities towards strengthening the national energy security, as well as in improving the legal and regulatory framework and operationalizing specific rapid large-

scale interventions to tackle energy poverty and support most vulnerable and affected groups of population and businesses.

The Programme duration is envisaged between 2022- 2023 with support from Foreign Policy Instrument (herewith FPI) of EU.

The Project Concept has been approved by FPI of the EU in February 2022, paving the way for development of the full project proposal.

With the approval of Law no. 139/2018 on energy efficiency, one of the basic priorities in the field is the strengthening of the capacities of specialists in the field of energy efficiency and the promotion of renewable energy sources. In this sense, a series of secondary documents regarding the training of specialists in this field were approved. The main documents being Decision Government Decision no. 676 of 10.09.2020 for the approval of the Regulation on energy auditors and energy audit, Decision no. 1051 of 08.11.2018 for the approval of the Regulation regarding the qualification and registration of installers of biomass-based boilers, furnaces or stoves, photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps, Government Decision no. 1003 of 10.12.2014 for the approval of the regulations regarding energy labeling requirements of some products with energy impact, etc.

In this context, in order to strengthen the capacities of educational institutions in order to train specialists in the field of energy efficiency and renewable energy sources, UNDP Moldova seeks the purchase of technical equipment necessary for the process of continuous training and training of specialists in the energy field for 5 educational institutions with energy profile.

The institutions that will benefit from technical equipment are:

- 1) Center for Continuing Education of the Technical University of Moldova, (Chisinau) <http://cfceecp.utm.md/>
- 2) Center of Excellence in Construction (Chisinau) <http://ccc.md/instalator-instalatii-de-incalzire-si-baterii-solare/>
- 3) Chisinau Technological College (Chisinau) <http://colegiutehologic.md/masini-si-aparate-electrice-de-uz-casnic/>
- 4) Soroca Agriculture Technical College <https://ipctasoroca.md/specialty/electromecanica/>
- 5) Balti Polytechnic College <http://cpbmd.info/>

C. SCOPE AND OBJECTIVES OF THE ASSIGNMENT

The main purpose of this task is:

- Increasing institutional capacities in the field of continuous training and education by providing technical equipment necessary for the training of specialists in the energy field (energy auditors, installers, students and pupils).
- To train the staff of educational institutions on the use and operation of the delivered technical equipment.

D. GENERAL RESPONSIBILITIES

- Carry out the assignment as defined in the Terms of Reference;
- Complete the final deliverable in a timely manner as defined below;
- Conduct all business in a manner that respects local culture;
- Maintain high ethical standards, avoiding any actual or perceived conflicts of interest and abiding by all local laws and/or all UNDP directives and requirements.

E. SPECIFIC RESPONSIBILITIES

The company will work in close consultation and collaboration with the responsible personnel from the educational institutions (5 targeted institutions) as well as the UNDP Moldova team to carry out the following specific tasks:

- The company will provide the equipment for each educational institution in accordance with the technical specifications described in the annex to this ToR for each separate batch;

- In coordination with the representatives of the educational institutions, for each batch, services will be offered for fitting out and mounting the delivered equipment in accordance with the beneficiary's requirements;
- The company will provide staff training services regarding the use of the delivered equipment;
- The company will ensure, as appropriate, the development of the project sketches necessary for the installation of the equipment;
- The company will make available to the beneficiary all the technical documentation related to the equipment;
- Ensuring quality control over the installed equipment.

The bidder will submit the bid for one or more lots according to para A. Summary of Requirements of this ToR. Deliverables will be provided for each lot separately and as per the table below.

Deliverable	Target Date from the date of contract signature		
	Lot 1 Tools and electrical equipment for training	Lot 2 Measurement and verification equipment for training	Lot 3 Laboratory stands for training
<u>Deliverable 1.</u> Delivery of equipment necessary for training and continuous training process according to LOT applied	3-5 weeks	4-6 weeks	16 - 18 weeks
<u>Deliverable 2.</u> Installation and arrangement of delivered equipment in coordination with the final beneficiary according to LOT applied	1-2 weeks	1-2 weeks	2 - 4 weeks
<u>Deliverable 3.</u> Training of educational institutions regarding the use of delivered equipment (5 targeted institutions) according to LOT applied	1 week	1 week	1 week

Note: The time period shown has been estimated to be sufficient/feasible for the equipment delivered and the scope of work to be successfully completed and is proposed as a guide for the duration of the assignment. The implementation of the Deliverable3 (training course) will take into account the constraints related to the availability of trainers and internal activities scheduled before the signing of the Contract. Provision of contemplated deliverables approved by UDNP shall be the sole criterion for completion of the Contractor's work and eligibility for payment/s.

F. PERIOD OF PERFORMANCE

The assignment will begin in January 2022 and end in March 2023.

G. REPORTING REQUIREMENTS

The Supplier shall report delivery progress to UNDP Moldova and deliver on time equipment.

The progress report shall be in a form acceptable to the Project responsible and shall indicate: (a) progress of delivery; and (b) where any activity is behind the contract completion, giving comments and likely consequences and stating the corrective action being taken.

H. PAYMENT

100% within 30 days upon UNDP's acceptance of the goods delivered as specified and receipt of invoice and training on operation and maintenance provided.

I. SUBCONTRACTING

The subcontracting of services is not allowed.

J. Technical Specifications for Goods

LOT 1. Tools and electrical equipment for training



Item No	Name of equipment	Quantity	Category of Equipment	Minimum Technical Requirements	Beneficiary institution
1	Drill drivers with battery	1	tool	Accumulator: 2x2.0Ah Battery type: Li-Ion Complete set: 2 batteries + suitcase Idling speed: 1300 min ⁻¹ Power type: Accumulator Max. diameter drilling steel: 10 mm Max. diameter wood drilling: 20 mm	Technological College from Chisinau
2	Transformer electronic	6	electrical equipment	Power (W): 150 W Voltage (V): 230 V Output voltage (V): 12 V	Technological College from Chisinau
3	Transformer for LED strip	1	electrical equipment	Power (W): 360 W Voltage (V): 220 - 240 V Current (A): 30 A Output voltage (V): DC 12V	Technological College from Chisinau
4	RGB LED amplifier	6	electrical equipment	Power (W): 288 W Voltage (V): 12 V Current (A): 24 A Degree of protection (IP): IP20	Technological College from Chisinau
5	RGB controller with remote	6	electrical equipment	Power (W): 72 W Voltage (V): 12 V Current (A): 2 A Degree of protection (IP): IP20 Options: Multifunctional Completion: AC adapter	Technological College from Chisinau

6	Freon charging station	1	tool	Charging Station Complete R134a Steel frame construction with Vacuum pump: RL-4 Vacuum gauge: 19800-SV Bellow gauges: oil-filled, Ø 60 Valves for connection of refrigeration systems and refrigerant-supply line	Technological College from Chisinau
7	Manifold (2-way manifold with Bourdon Type)	2	tool	Number of Ways: 2-way Type: Bourdon-type Accuracy Class: 1.6 Nominal Size: 68 Oil-filled: No Zero Point Adjustment: Yes Pressure Scale: bar psi Refrigerant(s): R134a R404A R507 Ball Valve: No Scope of Supply: 3 Charging hoses Packaging: Sturdy plastic case	Technological College from Chisinau
8	Pipe rolling device	2	tool	Tube Material - Copper; Aluminum; Plastics	Technological College from Chisinau
9	Refrigeration socket set inch sizes	2	tool	Number of Pieces: 21 Scope of Supply: Ratchet Intermediate piece 1/4" / 1/4" Extension 15.5 mm Special nut Cross handle Cardan joint Transition piece outside Transition piece inside Various inserts Packaging: Sturdy plastic case Material: Stainless steel LDPE	Technological College from Chisinau

10	Refrigeration socket set	2	tool	Number of Pieces: 20 Packaging: Sturdy plastic case Material: Stainless steel LDPE	Technological College from Chisinau
11	Torque wrench set in a handy case	1	tool	Torque adjustable from 10 to 75 Nm Key widths: 17, 19, 22, 24, 26, 27, 29 mm	Technological College from Chisinau
12	Screwdriver set	2	tool	10-piece screwdriver set made of chrome vanadium steel with non-slip handle	Technological College from Chisinau
13	LED projector with solar battery	30	electrical equipment	Power (W): 60 W Color temperature (K): 6400 K Luminous flux (lm): 1040 lm Protection (IP): IP65	Polytechnic College Balti
14	LED street lighting body with solar panel	20	electrical equipment	Power (W): 60 W Color temperature (K): 6500 K Voltage (V): 6V/10W Luminous flux (lm): 6000 lm Protection (IP): IP65	Polytechnic College Balti
15	Sensor day/night	20	electrical equipment	Power (W): 1200 W Voltage (V): 220 - 240 V Protection (IP): IP44 Form type: Indoor Type: Radar Lighting level (lux): 50	Polytechnic College Balti
16	Motion sensor	30	electrical equipment	Power (W): 1000 W Voltage (V): 220 - 240 V Form type: Outside Protection (IP): IP20 Type: Infrared Ambient temperature during operation: up to 24°C Options: 2 adjustable buttons (Time, luxury) Angle (degrees): 360° Distance (m): 8 m Lighting level (lux): 2000 Actuation duration (time): From 5 sec to 8/12 min	Polytechnic College Balti

17	Digital timer socket	20	electrical equipment	Power (W): 3680 W Voltage (V): 230 V Current (A): 16 A Protection (IP): IP20 Type: programmable	Polytechnic College Balti
18	LED projector	30	electrical equipment	Power (W): 50 W Color temperature (K): 6500 K Voltage (V): 220 - 240 V Protection (IP): IP65	Polytechnic College Balti
19	Analog programmable switch	30	electrical equipment	Power supply: 230 V ~ - 50/60 Hz Front panel 3-position "ON-AUTO-OFF" boost switch Manual switch to summer / winter time 1 output 16 A - 250 V ~ - $\mu \cos = 1$ Daily schedule 1 segment = 15 minutes Accuracy: ± 5 minutes Vertical keyboard With a power reserve of 100 hours Number of modules: 1	Polytechnic College Balti
20	Electronic socket timer	20	electrical equipment	Operating temperature range, °C: 0 ... + 40 Rated operating voltage Ue, V: 230 Rated frequency, Hz: 50 Rated current In, A: 8A (AC1) Characteristic: Maximum number of V / O cycles per day / week: 140; The minimum step of setting the operating time: 1 min; Battery life: at least 150 hours	Polytechnic College Balti
21	Mechanical time relay (programmable 24h analogue socket)	20	electrical equipment	Power supply: 230V AC / 50Hz Nominal load: 3500 W / 16 A Mode: 24 hours	Polytechnic College Balti

22	Wi-fi smart socket	20	electrical equipment	Current (A): 16 A Voltage (V): 250 V Frequency (Hz): 50...50 Hz Earthing: Yes Number of sockets - 1 With On/Off switch - Yes Protection (IP) - IP20	Polytechnic College Balti
23	Smart switch	30	electrical equipment	Size: 80mm*80mm*40mm Maximum voltage: 250 V Total nominal load: 2000 W Maximum current: 5 A Own consumption: less than 0.1mW Type: Wall Light Dimmer Switch, with light dimmer - changes the intensity of the light	Polytechnic College Balti
24	Unitary socket outdoor	50	electrical equipment	Current intensity: 16A Voltage (V): 220V Socket with child protection: Yes Mounting Type: Apparent Degree of protection (IP): IP44 Grounded: Yes	Polytechnic College Balti
25	External unitary switch	20	electrical equipment	Destination: Outside Voltage (V): 230 V Current (A): 10 A Protection (IP): IP44 Frequency: 50 Hz	Polytechnic College Balti
26	External double switch	20	electrical equipment	Voltage (V): 250 V Current (A): 10A Degree of protection (IP): IP44 Type: Hermetic Frequency: 50 Hz	Polytechnic College Balti
24	UZO automatic switch	10	electrical equipment	Model: VD1-63 Current intensity: 25A Number of poles: 2 Ambient temperature during operation: from -40°C to +50°C Nominal leakage current: 30mA Degree of protection (IP): IP20	Polytechnic College Balti

28	Automatic switch	50	electrical equipment	Voltage (V): 230 - 400V Current (A): 16 A No. Poles: 1P Car. electromagnetic release: C	Polytechnic College Balti
29	Low voltage arrester	10	electrical equipment	Voltage (V): 400 V Current (A): 20 kA No. Poles: 2P Car. electromagnetic release: C	Polytechnic College Balti
30	Photorele	20	electrical equipment	Power (W): 1100 W Voltage (V): 220 - 240 V Form type: Indoor Degree of protection (IP): IP44 Type: Radar Ambient temperature during operation: from -25°C to +40°C Options: 1 adjustable button (lux) Fixing method: Fixing support Lighting level (lux): 50	Polytechnic College Balti
31	Contactor	10	electrical equipment	Voltage (V): 220 V Current (A): 9 A Protection (IP): IP20 Frequency: 50 Hz	Polytechnic College Balti
32	Electric motor	3	electrical equipment	Power (W): 1.1 kW Voltage (V): 220/380 V Degree of protection (IP): IP54 Type: Asynchronous Frequency: 50 Hz Idling speed: 1000 rpm Attachment method: Sole Mode: S1 Basket ϕ : 0.71 Number of phases: Three-phase	Polytechnic College Balti

33	Contactor	20	electrical equipment	Voltage (V): 380 V Current (A): 65 A Degree of protection (IP): IP20 Type: 1NO+1NC No. Poles: 3P Frequency: 50/60 Hz	Polytechnic College Balti
34	Distribution box	40	electrical equipment	Dimensions (L x W x H x Ø) - 100 x 100 x 45 mm Material type - Plastic	Polytechnic College Balti
35	Outdoor automotive box	10	electrical equipment	The quantity of automatic switches: 1-16 pieces Installation mode: External Degree of protection: IP20	Polytechnic College Balti
36	Electrician tools set	10	tool	Professional electrician tool set of 68 specially selected tools. The straps and screwdrivers in the kit are insulated up to 1000V	Polytechnic College Balti
37	Assembly table	10	laboratory table	Leg height 22300mm Metal shelf 1330x3000mm Perforated wall 1330x3000mm	Polytechnic College Balti
38	LED street lighting body with solar panel	4	electrical equipment	Power (W): 90 W Color temperature (K): 6500 K Voltage (V) : 6V/14W Luminous flux (lm): 9000 lm Degree of protection (IP) - IP65	IP Agricultural Technical College from Soroca
39	LED street lighting body with solar panel	4	electrical equipment	Power (W): 50 W Average lifetime (h): 12-15 h Color temperature (K): 6400 K Luminous flux (lm): 950 lm Degree of protection (IP): IP65	IP Agricultural Technical College from Soroca
40	Support for street lighting body	8	electrical equipment	Dimensions (L x W x H x Ø) - 300 x 40 mm Material type: Metal	IP Agricultural Technical College from Soroca
41	Single-phase electric meter	4	electrical equipment	Voltage (V): 220 V Current (A): 40 A Type: Digital Number of phases: Single phase	IP Agricultural Technical College from Soroca

42	Three-phase electric meter	2	electrical equipment	Voltage (V): 230 - 400V Current (A): 5 - 100 A Degree of protection (IP): IP20 Type: Digital Number of phases: Three-phase	IP Agricultural Technical College from Soroca
43	Electric cable	100 m	electrical equipment	Color: Black Material type: Copper Number of threads: 3 Type: PVS Section: 1.5 mm ²	IP Agricultural Technical College from Soroca
44	Electric cable	100 m	electrical equipment	Model: PVS White: color Material type: Copper Number of threads: 3 Section: 1.5 mm ²	IP Agricultural Technical College from Soroca
45	Electric cable	100 m	electrical equipment	Color: Black Material type: Copper Number of threads: 3 Type: PVS Section: 2.5 mm ²	IP Agricultural Technical College from Soroca
46	Voltage stabilizer	1	electrical equipment	Power (W): 1200 W Voltage (V): 140 - 275 V	IP Agricultural Technical College from Soroca
47	Voltage stabilizer	1	electrical equipment	Power (W): 4 kW Voltage (V): 220/230 V	IP Agricultural Technical College from Soroca
48	Single-phase inverter	1	electrical equipment	Power (W): 1.5 kW Voltage (V): 220 - 240 V Degree of protection (IP): IP20 Number of phases: Single phase	IP Agricultural Technical College from Soroca
49	Inverter 220 V	1	electrical equipment	Power (W): 2000 W Voltage (V): 12 V Output voltage (V): 220 V	IP Agricultural Technical College from Soroca

50	Three-phase electric motor	2	electrical equipment	Power (W): 0.37 kW Voltage (V): 220/380 V Degree of protection (IP): IP55 Frequency: 50 Hz Idling speed: 1000 rpm Grip method: Sole Shaft size (Ø x L): 14 x 30 mm Mode: S1 Basket ϕ : 0.70 Number of phases: Three-phase	IP Agricultural Technical College from Soroca
51	Three-phase electric motor	1	electrical equipment	Power (W): 750 W Voltage (V): 380 V Degree of protection (IP): IP55 Type: Asynchronous Frequency: 50 Hz Idling speed: 3000 rpm Grip method: Sole Shaft size (Ø x L): 19 x 40 mm Regime: MS Basket ϕ : 0.83 Number of phases: Three-phase	IP Agricultural Technical College from Soroca
52	Three-phase electric motor	1	electrical equipment	Power (W): 1.1 kW Voltage (V): 220/380 V Degree of protection (IP): IP55 Type: Asynchronous Frequency: 50 Hz Idling speed: 1500 rpm Grip method: Sole Shaft size (Ø x L): 24 x 50 mm Mode: S1 Number of phases: Three-phase	IP Agricultural Technical College from Soroca
53	Electrician tools set	2	tool	Professional electrician tool set of 68 specially selected tools. The straps and screwdrivers in the kit are insulated up to 1000V	IP Agricultural Technical College from Soroca

54	Tool set	1	tool	Material type - Chrome vanadium Pieces in set - 94	IP Agricultural Technical College from Soroca
55	Photovoltaic plant for laboratory	1	electrical equipment	4 x 275W panels 1 x Inverter 1100W Aluminum fasteners Power cable 4-6mm Connections fitting	IP Agricultural Technical College from Soroca
56	Assembly table	5	laboratory table	Leg height 22300mm Metal shelf 1330x3000mm Perforated wall 1330x3000mm	IP Agricultural Technical College from Soroca
57	LED projector with the solar battery	2	electrical equipment	Power (W): 60 W Color temperature (K): 6400 K Luminous flux (lm): 1040 lm Protection (IP): IP65	IP Agricultural Technical College from Soroca
58	Sensor day/night	8	electrical equipment	Power (W): 1200 W Voltage (V): 220 - 240 V Protection (IP): IP44 Form type: Indoor Type: Radar Lighting level (lux): 50	IP Agricultural Technical College from Soroca
59	Motion sensor	5	electrical equipment	Power (W): 1000 W Voltage (V): 220 - 240 V Form type: Outside Protection (IP): IP20 Type: Infrared Ambient temperature during operation: up to 24°C Options: 2 adjustable buttons (Time, luxury) Angle (degrees): 360° Distance (m): 8 m Lighting level (lux): 2000 Actuation duration (time): From 5 sec to 8/12 min	IP Agricultural Technical College from Soroca

60	Digital timer socket	10	electrical equipment	Power (W): 3680 W Voltage (V): 230 V Current (A): 16 A Protection (IP): IP20 Type: programmable	IP Agricultural Technical College from Soroca
61	Analog programmable switch	5	electrical equipment	Power supply: 230 V ~ - 50/60 Hz Front panel 3-position "ON-AUTO-OFF" boost switch Manual switch to summer / winter time 1 output 16 A - 250 V ~ - $\mu \cos = 1$ Daily schedule 1 segment = 15 minutes Accuracy: ± 5 minutes Vertical keyboard With a power reserve of 100 hours Number of modules: 1	IP Agricultural Technical College from Soroca
62	Electronic socket timer	5	electrical equipment	Operating temperature range, °C: 0 ... + 40 Rated operating voltage Ue, V: 230 Rated frequency, Hz: 50 Rated current In, A: 8A (AC1) Characteristic: Maximum number of V / O cycles per day / week: 140; The minimum step of setting the operating time: 1 min; Battery life: at least 150 hours.	IP Agricultural Technical College from Soroca
63	Mechanical time relay (programmable 24h analogue socket)	5	electrical equipment	power supply: 230V AC / 50Hz nominal load: 3500 W / 16 A mode: 24 hours	IP Agricultural Technical College from Soroca
64	Wi-fi smart socket	5	electrical equipment	Current (A): 16 A Voltage (V): 250 V Frequency (Hz): 50...50 Hz Earthing: Yes Number of sockets - 1 With On/Off switch - Yes Protection (IP) - IP20	IP Agricultural Technical College from Soroca

65	Unitary socket outdoor	5	electrical equipment	Current intensity: 16A Voltage (V): 220V Socket with child protection: Yes Mounting Type: Apparent Degree of protection (IP): IP44 Grounded: Yes	IP Agricultural Technical College from Soroca
66	External unitary switch	20	electrical equipment	Destination: Outside Voltage (V): 230 V Current (A): 10 A Protection (IP): IP44 Frequency: 50 Hz	IP Agricultural Technical College from Soroca
67	External double switch	20	electrical equipment	Voltage (V): 250 V Current (A): 10A Degree of protection (IP): IP44 Type: Hermetic Frequency: 50 Hz	IP Agricultural Technical College from Soroca
68	UZO automatic switch	5	electrical equipment	Current intensity: 25A Number of poles: 2 Ambient temperature during operation: from -40°C to +50°C Nominal leakage current: 30mA Degree of protection (IP): IP20	IP Agricultural Technical College from Soroca
69	Automatic switch	10	electrical equipment	Voltage (V): 230 - 400V Current (A): 16 A No. Poles: 1P Car. electromagnetic release: C	IP Agricultural Technical College from Soroca

70	Photorele	5	electrical equipment	Power (W): 1100 W Voltage (V): 220 - 240 V Form type: Indoor Degree of protection (IP): IP44 Type: Radar Ambient temperature during operation: from -25°C to +40°C Options: 1 adjustable button (lux) Fixing method: Fixing support Lighting level (lux): 50	IP Agricultural Technical College from Soroca
71	Distribution box	10	electrical equipment	Dimensions (L x W x H x Ø) - 100 x 100 x 45 mm Material type - Plastic	IP Agricultural Technical College from Soroca
72	Generator gasoline 3 kW 220 V	1	electrical equipment	Output voltage (V) 220 V frequency 50 Hz Fuel type Benzine Rated power (W) 3kW	IP Agricultural Technical College from Soroca

LOT 2. Measurement and verification equipment for training

Item No	Name of equipment	Quantity	Category of Equipment	Minimum Technical Requirements	Beneficiary institution
1	Combustion Analyzer for Commercial and Industrial Applications	1	M&V	<p>Operating temperature: 23° to 122 °F / -5 to +50 °C</p> <p>Housing: TPE PC</p> <p>Protection class: IP40</p> <p>Connectable probes: 1 x flue gas probe; 1 x temperature probe; 1 x differential pressure</p> <p>Display type: graphic Display</p> <p>User defined fuels: 10 user-defined fuels incl. test gas as fuel</p> <p>Pump flow: 0.6 l/min (regulated)</p> <p>Hose length: max. 7.8 m (corresponds to two probe hose extensions)</p> <p>Max. pos. press./flue gas: 0.725 psi / 50 mbar</p> <p>Max. neg. press./flue gas: -2.901 psi / -200 mbar</p> <p>Maximum: 100 folders</p> <p>Storage per folder: Max. 10 sites</p> <p>Storage per site: Max. 200 logs</p> <p>Miscellaneous: The max. number of logs is determined by the number of folders or sites</p> <p>Interface: Bluetooth®; USB; IR/IRDA interface; gas outlet; Mains connection; probe input/ probe inputs; Differential Pressure</p> <p>Storage temperature: -4° to 122 °F / -20 to +50 °C</p>	Center of Excellence in Construction
2	Infrared thermometer with laser marking	1	M&V	<p>Measuring range: -22.0° to 752.0 °F / -30 to +400 °C</p> <p>Accuracy: ± 2.7 °F or 1.5 % of mv (32.2° to 752.0 °F) / ± 1.5 °C or ± 1.5 % of mv (+0.1 to +400 °C)</p> <p>± 3.6 °F or ± 2 % of mv (-22.0° to 32.0 °F) (the higher value applies) / ± 2 °C or ± 2 % of mv (-30 to 0 °C) (the higher value applies)</p> <p>Measuring rate: 0.5 sec</p> <p>Infrared resolution: 0.1 °F / 0.1 °C</p>	Center of Excellence in Construction
3	Pressure and flow velocity measuring instrument	1	M&V	<p>Measuring range: 0 to +800 lnh₂O / 0 to +2000 hPa</p> <p>Accuracy: 0.5 % Fs</p> <p>Resolution: 1 lnh₂O / 1 hPa</p> <p>Overload: ± 1600 lnh₂O / ± 4000 hPa</p> <p>Operating temperature: 32° to 140 °F / 0 to +60 °C</p> <p>Measuring medium: All non-corrosive gases</p>	Center of Excellence in Construction

4	Light meter	1	M&V	<p>Measuring range: 0 to 99999 Lux</p> <p>Accuracy: ± 3 Lux or ± 3 % (compared to reference instrument at 90° light irradiation)</p> <p>Resolution: 1 Lux (0 to 19999 Lux)</p> <p>10 Lux (Remaining Range)</p> <p>Measuring rate: 0.5 sec</p>	Center of Excellence in Construction
5	Digital temperature meter	1	M&V	<p>Measuring range: -58.0° to 1832.0 °F / -50 to +1000 °C</p> <p>Accuracy: $\pm(0.9$ °F + 0.3 % of mv) (-40.0° to 1652.0) / $\pm(0.5$ °C + 0.3 % of mv) (-40 to +900 °C) $\pm(1.3$ °F + 0.5 % of mv) (Remaining Range) / $\pm(0.7$ °C + 0.5 % of mv) (Remaining Range)</p> <p>Resolution: 0.1 °F (-58° to 391.8 °F) / 0.1 °C (-50 to +199.9 °C)</p> <p>1.0 °F (Remaining Range) / 1 °C (Remaining Range)</p> <p>Operating temperature: -4.0° to 122.0 °F / -20 to +50 °C</p> <p>Housing: ABS</p> <p>Number of channels: 2-channel</p>	Center of Excellence in Construction
6	Thermal camera	1	M&V	<p>IR Resolution: 320 x 240 pixels (with testo Super Resolution technology 640 x 480 pixels)</p> <p>Thermal Sensitivity/NETD: <0.04 °C</p> <p>Accuracy: ± 2 °C, ± 2 % of m.v.; (greater value applies)</p> <p>Digital Camera: 5 MP</p> <p>Display type: 8.9 cm (3.5") TFT, QVGA (320 x 240 pixels)</p> <p>Storage device: Internal Memory min. 2.8 GB</p> <p>Case included: yes</p>	Center of Excellence in Construction
7	The portable Flowmeter for Gases in hazardous areas	1	M&V	<ul style="list-style-type: none"> • Measurement uncertainty at the measuring point $\pm 1...3$ % of reading • Repeatability 0.15 % of reading • Flow velocity range 0.03 to 115 ft/s, depending on pipe diameter • Ex zone transmitter FM Class I /Div 2 • Power supply Li-ION, Operat. time >25h • Available transducers Shear wave/Lamb wave for Ex zones FM Class I /Div 2 • for pipe sizes range 0.28 inch to 63 inch • for temperature range -40°F to +392°F 	Continuous Training Center in the field of energy efficiency of public buildings

8	Thermal camera	1	M&V	<ul style="list-style-type: none"> • IR Resolution 320 × 240 pixels • Thermal Sensitivity/NETD <40 mK at 30°C • Accuracy ±2°C or ±2% of the reading • Digital Camera 5 MP, with built-in LED photo/video lamp • Display 4", 640 × 480 pixel touchscreen LCD • Storage Media Removable SD card • Accuracy ±2°C or ±2% of the reading • Object Temperature Range -20 to 120°C; 0 to 650°C 	Continuous Training Center in the field of energy efficiency of public buildings
9	Ultrasonic Leak Detector of Gas, Compressed Air, Bearing monitoring, Machinery Lubrication	1	M&V	<ul style="list-style-type: none"> • Function Multifunction detector • Display Graphic LCD with backlighting (128 x 64) • Keyboard 12 function keys • Built-in sensors: Ultrasonic sensor; Pyrometer (according to the version). • External sensors: Through specific connector (Lemo 7 pin connector) • Data Logger - 100 Measurement Nodes (measurement points) - Total 4000 easurements (measurements data) • Communication: USB interface • Operating temperature -15 °C to +60 °C • Noise isolating, NRR 25 dB (tested in an accredited NVLAP laboratory) 	Continuous Training Center in the field of energy efficiency of public buildings

10	Analysis box for exhaust gas analysis systems	1	M&V	<p>Analysis unit equipped with an O2 sensor. Additional gas sensors can be selected from CO, NO, NO2, SO2, H2S, CxHy or CO2.</p> <p>Measuring range: -20 to +50 °C</p> <p>Accuracy: ± 0.2 °C (-10 to +50 °C)</p> <p>Resolution : 0.1 °C (-20 to +50 °C)</p> <p>Ambient temperature samples</p> <p>Type K (NiCr-Ni)</p> <p>Measuring range: -200 to +1370 °C</p> <p>Accuracy: ± 0.4 °C (-100 to +200 °C)</p> <p>± 1 °C (-200 to -100.1 °C)</p> <p>± 1 °C (200.1 to +1370 °C)</p> <p>Resolution: 0.1 °C (-200 to +1370 °C)</p> <p>Type S (Pt10Rh-Pt)</p> <p>Measuring range: 0 to +1760 °C</p> <p>Accuracy: ± 1 °C (0 to +1760 °C)</p> <p>Resolution: 0.1 °C (0 to +1760 °C)</p> <p>Differential pressure - piezoresistive</p> <p>Measurement range: -40 to +40 hPa</p> <p>-200 to +200 hPa</p> <p>Accuracy: $\pm 1.5\%$ of measured value (-40 to -3 hPa)</p> <p>$\pm 1.5\%$ of the measured value (+3 to +40 hPa)</p> <p>± 0.03 hPa (-2.99 to +2.99 hPa)</p> <p>$\pm 1.5\%$ of measured value (-200 to -50 hPa)</p> <p>$\pm 1.5\%$ of the measured value (+50 to +200 hPa)</p> <p>± 0.5 hPa (-49.9 to +49.9 hPa)</p> <p>Resolution: 0.01 hPa (-40 to +40 hPa)</p> <p>0.1 hPa (-200 to +200 hPa)</p> <p>Absolute pressure</p> <p>Measuring range: 600 to +1150 hPa</p> <p>Accuracy: ± 10 hPa</p> <p>Resolution: 1 hPa</p>	Continuous Training Center in the field of energy efficiency of public buildings
----	--	---	-----	--	--

11	Multilyzer NG	1	M&V	<ul style="list-style-type: none"> • Flue gas temperature/temperature difference 0°C/+1,000°C • External wall/air temperature -20°C/+200°C • Draft, nominal +/- 70 hPa • Draft, maximum +/- 130 hPa • O2 0/21% volume • CO2 determination, indication range 0/CO2 max. • COH2 0/4,000 ppm • CO high (solid fuel) 0/20,000 ppm • NO 0/2,000 ppm • NO2 0/200 ppm • SO2 0/2,000 ppm • Table (device) approx. 750 g • LCD display • 7 mm draft/pressure connection • 8 mm gas connection • Data saving of a maximum of 100 measurements • USB, infrared, Bluetooth interfaces. 	Continuous Training Center in the field of energy efficiency of public buildings
12	Laser telemeter	1	M&V	<ul style="list-style-type: none"> • Operating range: 150 m • Accuracy: +/- 1 mm • Laser class: II • Measurement time: 0.5-4 s 	Continuous Training Center in the field of energy efficiency of public buildings

13	Electrical clamps wattmeter	1	M&V	<ul style="list-style-type: none"> • Type of meter: power clamp meter • Max. diameter of measured cable: 42mm • Kind of display used: LCD 4 digits (9999) • Sampling: 1x/6s (kW, kVA, kVAR), 2,5x/s • DC current measuring range: 10nA...99.99µA/999.9µA • AC current measuring range (1) indirect measurement) 10mA...99.99A/999.9A • DC current measuring accuracy: $\pm(1\% + 20 \text{ digits})$ • Bandwidth for AC current measurements: 40...400Hz • AC current measuring accuracy: $\pm(2\% + 20 \text{ digits})$ • DC voltage measuring range: 0.1...999.9mV/ 9999mV/99.9V/600V • DC voltage measuring accuracy: $\pm(1\% + 20 \text{ digits})$ • AC voltage measuring range: 0.1...999.9mV/9999mV/99.99V/600V • AC voltage measuring accuracy: $\pm(1\% + 20 \text{ digits})$ • True RMS AC+DC • Bandwidth for AC voltage measurements 40...400Hz • Resistance measuring range: 9.999kΩ/99.99kΩ/999.9kΩ/9.999MΩ/99.99MΩ • Capacitance measuring range: 1nF...10µF/100µF/1000µF/7000µF • Capacitance measuring accuracy: $\pm(1,5\% + 5 \text{ digits})$ 	Continuous Training Center in the field of energy efficiency of public buildings
14	Energy analyzer	1	M&V	<ul style="list-style-type: none"> • AC+DC TRMS voltage up to 1,000 V • TRMS current AC+DC: 5 mA up to 10 kA depending on the sensors • Harmonics from 0 to the 50th order, phase • Transients: up to 210 • Inrush with waveforms for a period > 10 min • TrueInrush function • Recording a selection of parameters at the maximum sampling rate in a period from a few days to a few weeks • Peak detection • Vector representation • IP53/IK08 • IEC 61000-4-30 Class B 	Continuous Training Center in the field of energy efficiency of public buildings

15	Digital multimeter	4	M&V	Type: 6 in1 Ambient temperature during operation: from -10°C to +60°C Sound level: 35 - 100 dB Measuring range: 33%...99%RH	Technological College from Chisinau
16	Digital clamp meter for measuring voltage and resistance	4	M&V	AC voltage: 600 V AC: 1000 A Resistance: 20mOm Diode test: da	Technological College from Chisinau
17	Ammeter	6	M&V	Current (A): 0 - 50 A	Technological College from Chisinau
18	Voltmeter	6	M&V	Voltage (V): 0 - 20 V Working voltage: 0 - 20 V	Technological College from Chisinau
19	Oscilloscope	1	M&V	Type of oscilloscope: digital Kind of oscilloscope: DSO Display: colour Number of channels: 2 Sampling: 1Gsps Max. input voltage: 300V Input coupling: AC, DC, GND In. imp.: 1MΩ/20pF Time base: 2n...1ks/div Interface: USB	Technological College from Chisinau

20	Laboratory power supply	4	M&V	Digital display: voltage, current Coarse and fine adjustment (voltage and current (current limit)) Stepless voltage adjustment Short-circuit protection Two ranges of current display: mA / A Output voltage: 0-30 V Output current: 0-5 A Current limitation: 0-5 A Accuracy: 0.1 V Voltage stability: <0.01% +/-2 mV Temperature coefficient: <200PPM/°C The power supply features high stability, reliability and low noise	Technological College from Chisinau
21	Electronic scale	1	M&V	Capacity: 130 kg Resolution: 10g Accuracy: +/-0.1%	Technological College from Chisinau
22	Digital thermometer	2	M&V	Measured Variable: Temperature Temperature measuring range: -40 - +150 °C Accuracy: +/- 1 °C Temperature Resolution: +/- 0.1 °C Temperature Units: °C Scope of Supply: Batteries RoHS Conformity: Yes	Technological College from Chisinau

23	Digital multimeter	2	M&V	DC Voltage: 0.1 mV–1000 V AC TRMS Voltage: 0.1 mV–750 V DC Current: 0.1 μ A–10 A AC TRMS Current: 0.1 μ A–10 A Resistance: 0.1 1–40 M Ω Frequency: 1 Hz–400 MHz Capacitance: 0.001 nF–40 mF Temperature: –40 °F to 1382 °F –40 °C to 800 °C	Technological College from Chisinau
24	Luxmeter	10	M&V	Illuminance measurement (LUX): 0~199,900Lux Illuminance measurement (Fc): 0~18,500Fc Accuracy: 0~9999Lux/0~999Fc: $\pm(4\%+8)$ ≥ 10000 Lux/ ≥ 1000 Fc: $\pm(5\%+10)$ ≥ 100000 Lux/ ≥ 9999 Fc: $\pm(5\%+10)$ Resolution: 1Lux (0~9999Lux) 10Lux ($\geq 10,000$ Lux) 100Lux ($\geq 100,000$ Lux) 1Fc (0~9999Fc); Fc=Lux/10.76 10Fc ($\geq 10,000$ Fc); Fc=Lux/10.76 Sampling time: 0.5s	Polytechnic College Balti
25	Voltmeter and digital ammeter	4	M&V	Voltage (V): 220 - 240 V Current (A): 5 A	IP Agricultural Technical College from Soroca
26	Digital voltmeter	3	M&V	Voltage (V): 220 V Accuracy: 1% Working voltage: 0 - 600 V Consumption: <3VA	IP Agricultural Technical College from Soroca
27	Digital ammeter	3	M&V	Current (A): 5A	IP Agricultural Technical College from Soroca

28	Digital cable detector	2	M&V	Steel detection depth: 100 mm Copper detection depth: 80 mm Detection depth of live conductors: 50 mm Detectable materials: ferrous, non-ferrous metals, electrical conductors	IP Agricultural Technical College from Soroca
29	Digital clamp	3	M&V	Voltage (V): 0-600 V Type - AC/DC	IP Agricultural Technical College from Soroca
30	Digital multimeter	1	M&V	Voltage (V): 0.1m...200m/2V/20V/200V/1000V Weight: 375 g Current (A): 0.1μ...200μ/20μ/20m/200m/2A/20A Type: AC/DC Frequency: 40 - 200 Hz	IP Agricultural Technical College from Soroca
31	Electric cable detector in the walls	1	M&V	Frequency: 0-60 Hz Ambient temperature during operation: from 0°C to +40°C	IP Agricultural Technical College from Soroca
32	Compact mini anemometer	1	M&V	Ambient temperature during operation: from 0°C to +50°C Measuring range: 1.1-30 m/s	IP Agricultural Technical College from Soroca
33	Luxmeter	3	M&V	Illuminance measurement (LUX): 0~199,900Lux Illuminance measurement (Fc): 0~18,500Fc Accuracy: 0~9999Lux/0~999Fc: ±(4%+8) ≥10000Lux/≥1000Fc: ±(5%+10) ≥100000Lux/≥9999Fc: ±(5%+10) Resolution: 1Lux (0~9999Lux) 10Lux (≥10,000Lux) 100Lux (≥100,000Lux) 1Fc (0~9999Fc); FC=Lux/10.76 10Fc (≥10,000Fc); FC=Lux/10.76 Sampling time: 0.5s	IP Agricultural Technical College from Soroca

LOT III. Laboratory stands for training

Item No	Name of equipment	Quantity	Category of Equipment	Minimum Technical Requirements	Beneficiary institution
1	Calorimeters	1	laboratory installation	<ul style="list-style-type: none"> • Measuring range max.40000 J • Touchscreen: yes • Working temperature: 22 - 30 °C • Temperature measurement resolution: 0.0001 K • Cooling medium temperature: 12 - 27 °C • Cooling medium permissible operating pressure 1.5 bar • Cooling medium tap water • Type of cooling flow • Chiller RC 2 basic • Flow rate: 60 - 70 l/h • Rec. flow rate at 18°C: 60 l/h • Oxygen operating pressure max. : 40 bar • Interface scale: RS232 • Interface printer USB • Interface PC: RS232 	Continuous Training Center in the field of energy efficiency of public buildings
2	Drying oven	1	laboratory installation	<ul style="list-style-type: none"> • Heat output: 2400 W • Working temperature: room temp. +5 – 250 °C • Adjustment and display resolution: 0.1 K • Temperature constancy in medium: 0.3 ±K • Temperature display: yes • Timer display: 7 segment LED • Time setting range: 1 – 144000 min • Number of trays max.: 6 • Load for one tray max.: 30 kg • Operating area inner chamber: 550 x 525 x 450 mm • Total volume inner chamber: 125 l • Permissible ambient temperature: 5 – 40 °C • Permissible relative humidity: 80% 	Continuous Training Center in the field of energy efficiency of public buildings

3	Laboratory stand „Heat pump“	1	laboratory installation	<ul style="list-style-type: none"> • heating capacity: approx. 2,3 kW at 5/65°C • Heating and source circuit pumps • max. flow rate: 3m3/h • max. head: 4m Heating controller <ul style="list-style-type: none"> • inputs: up to 16 • outputs: up to 16 • interfaces: DL bus, CAN, LAN Refrigerant <ul style="list-style-type: none"> • R410A Measuring ranges <ul style="list-style-type: none"> • temperature: • 4x -50...180°C • 3x 0...120°C • 1x -20...60°C • flow rate: 2x 20...2500L/h (water) • pressure: • 1x -1...15bar • 1x -1...49bar • 2x 0...6bar • 2x 0...50bar • 1x 0...18bar • 2x 0...10bar 400V, 50Hz, 3 phases; 400V, 60Hz, 3 phases 230V, 60Hz, 3 phases; UL/CSA optional	Continuous Training Center in the field of energy efficiency of public buildings
---	---	---	-------------------------	--	--

4	Laboratory stand „Underfloor heating / geothermal energy absorber“	1	laboratory installation	Pipes lengths: 10m, 20m, 30m material: polyethylene wall thickness: 2mm outer diameter: 16mm operating pressure: max. 3bar Tank volume: 200L Measuring ranges temperature: 3x -50...180°C flow rate: 20...2500L/h 230V, 50Hz, 1 phase UL/CSA optional	Continuous Training Center in the field of energy efficiency of public buildings
5	Laboratory stand „Fan heater / air heat exchanger“	1	laboratory installation	Fan speed: 900/1400min-1 flow rate: 683/1155m3h-1 Heat exchanger nominal cooling capacity: 2kW max. operating pressure: 10bar Measuring ranges temperature: 3x -50°C...180°C flow rate: 20...2500L/h 230V, 50Hz, 1 phase	Continuous Training Center in the field of energy efficiency of public buildings

6	Laboratory stand „Steam generator, electrical"	1	laboratory installation	<p>Steam boiler</p> <ul style="list-style-type: none"> • volume: 24L • max. pressure: 7bar • heating power: 6kW • max. steam output: 8,1kg/h <p>Feed water tank: 45L</p> <p>Superheater</p> <ul style="list-style-type: none"> • power: 750W • max. temperature: 250°C <p>Condensate pump</p> <ul style="list-style-type: none"> • max. flow rate: 0,6L/min <p>Submersible pump</p> <ul style="list-style-type: none"> • max. flow rate: 10L/min <p>Storage tank: 15L</p> <p>Measuring ranges</p> <ul style="list-style-type: none"> • temperature: 6x 0...400°C • pressure: 0...1,6bar abs. (condenser), 0...16 bar abs. (live steam) • flow rate: 0...720L/h (cooling water) <p>Steam supply unit</p> <p>230V, 60Hz, 3 phases, 400V, 60Hz, 3 phases</p> <p>400V, 50Hz, 3 phases</p> <p>Steam processing</p> <p>230V, 60Hz, 1 phase, 230V, 50Hz, 1 phase</p> <p>120V, 60Hz, 1 phase, UL/CSA optional</p>	Continuous Training Center in the field of energy efficiency of public buildings
---	---	---	-------------------------	--	--

7	Laboratory stand „Comparison of various heat exchangers"	1	laboratory installation	<p>Plate heat exchanger, (water-water)</p> <ul style="list-style-type: none"> • number of plates: 10 • heat transfer area: approx. 0,26m² • output: 15kW <p>Tubular heat exchanger (water-water)</p> <ul style="list-style-type: none"> • heat transfer area: 0,1m² <p>Shell & tube heat exchanger (water-water)</p> <ul style="list-style-type: none"> • output: 13kW <p>Finned tube heat exchanger (water-air)</p> <ul style="list-style-type: none"> • heat transfer area: approx. 2,8m² • fan max. flow rate: 780m³/h • fan max. pressure difference: 430Pa <p>Stirred tank with double jacket and coiled tube (water-water)</p> <ul style="list-style-type: none"> • double jacket heat transfer area: 0,16m² • coiled tube heat transfer area: 0,17m² <p>Measuring ranges</p> <ul style="list-style-type: none"> • differential pressure: • 1x 0...10mbar (air) • 1x 0...1000mbar (water) • flow rate: 2x 0...3m³/h • temperature: 10x 0...100°C <p>230V, 50Hz, 1 phase UL/CSA optional</p>	Continuous Training Center in the field of energy efficiency of public buildings
---	---	---	-------------------------	---	--

8	Laboratory stand „Gas turbine with power turbine"	1	laboratory installation	<p>Gas generator (compressor and high-pressure turbine)</p> <ul style="list-style-type: none"> • speed range: 60000...125000min-1 • max. pressure ratio: 1:2,0 • max. mass flow rate (air): 0,115kg/sec • max. fuel consumption: 120g/min <p>Power turbine</p> <ul style="list-style-type: none"> • speed range: 10000...40000min-1 • mechanical power: 0...1,5kW • electrical power: 0...1kW • sound level at 1m distance: max. 80dB(A) • temperature exhaust gas: 700°C <p>Measuring ranges</p> <ul style="list-style-type: none"> • temperature: 4x 0...200°C / 3x 0...1200°C • speed: 0...199999min-1 • electric power: 0...1999W • velocity: 0...28m/s (air inlet) • flow rate: 1,5...10,5kg/h (fuel) • supply pressure: 0...25bar (fuel) • nozzle pressure: 0...4bar (fuel) • combustion chamber pressure loss: 0...20mbar • pressure (inlet):power turbine 0...2,5bar (power turbine) • pressure (inlet): 0...250mbar (power turbine) <p>230V, 50Hz, 1 phase UL/CSA optional</p>	Continuous Training Center in the field of energy efficiency of public buildings
---	--	---	-------------------------	--	--

9	Laboratory stand „Axial steam turbine“	1	laboratory installation	<p>Single-stage axial impulse turbine</p> <ul style="list-style-type: none"> • rotor inner diameter: 54mm • max. speed: 40000min-1 • max. inlet pressure: 9bar abs. • max. outlet pressure: 1bar abs. • nominal power output: 50W <p>Measuring ranges</p> <ul style="list-style-type: none"> • pressure: • 0...16bar (steam) • 0...1,6bar (condenser) • differential pressure: 0...50mbar • flow rate: 0...720L/h (cooling water) • speed: 0...50000min-1 • torque: 0...70Nmm • temperature: 0...400°C <p>230V, 50Hz, 1 phase UL/CSA optional</p>	Continuous Training Center in the field of energy efficiency of public buildings
---	---	---	-------------------------	--	--

10	Laboratory stand „Parabolic trough collector with solar tracking"	1	laboratory installation	PLC: Eaton XV-303 Collector <ul style="list-style-type: none"> • parabolic mirror • trough length: 1,4m • aperture width: 1,1m • mirror surface: 1,5m² • focal length: 0,3m • absorber • selectively coated absorber tubes with U-tube line for heat transfer fluid • double-walled glass shell to reduce heat loss • solar circuit station • solar pump: adjustable Hot water circuit <ul style="list-style-type: none"> • plate heat exchanger: 3kW, 10 plates • buffer tank: 70L Measuring ranges <ul style="list-style-type: none"> • flow rate: 20...320L/h • temperature: 4x 0...160°C • pressure: 0...6bar 230V, 50Hz, 1 phase, UL/CSA optional	Continuous Training Center in the field of energy efficiency of public buildings
11	Laboratory stand "Electrical networks and installations"	1	laboratory installation	Power supply: 1~220 V, 50 Hz Power consumption, kW, max - 0,3 Overall dimensions, max: width, mm 1310 height, mm 1470 depth, mm 610 Weight, kg, max 70	IP Agricultural Technical College from Soroca

12	Laboratory stand "Installation and adjustment of electrical installations"	2	laboratory installation	Power supply 3~380/220V, 50Hz Power consumption, Watt, max 500 Stand overall dimensions, max: Width, mm 1310 Height, mm 1470 Depth, mm 600 Weight, kg, max 60 Desktop version overall dimensions, max: Width, mm 1310 Height, mm 680 Depth, mm 600 Weight, kg, max 45	IP Agricultural Technical College from Soroca
13	Laboratory stand "DC motor excited in series with MPSU"	1	laboratory installation	Power supply ~50Hz 220V / 3~50Hz 220V 3P+PE+N (at power supply from step-down transformer 380/220 V) Power consumption, kW, max 0,3/1 Overall dimensions, max: width, mm 1025 height, mm 1455 depth, mm 600 Weight, kg, max 120	IP Agricultural Technical College from Soroca

K. Delivery and other Related Requirements



Delivery date	Bidder shall deliver the goods as per below table:			
	Deliverable	Target Date from the date of contract signature		
		LOT 1 Tools and electrical equipment for training	LOT 2 Measurement and verification equipment for training	LOT 3 Laboratory stands for training
	Deliverable 1. Delivery of equipment necessary for training and continuous training process according to LOT applied	3-5 weeks	4-6 weeks	16 - 18 weeks
	Deliverable 2. Installation and arrangement of delivered equipment in coordination with the final beneficiary according to LOT applied	1-2 weeks	1-2 weeks	2 - 4 weeks
	Deliverable 3. Training of educational institutions regarding the use of delivered equipment (5 targeted institutions) according to LOT applied	1 week	1 week	1 week
	Note: The time period shown has been estimated to be sufficient/feasible for the equipment delivered and the scope of work to be successfully completed and is proposed as a guide for the duration of the assignment. The implementation of the Deliverable 3 (training course) will take into account the constraints related to the availability of trainers and internal activities scheduled before the signing of the Contract. Provision of contemplated deliverables approved by UDNP shall be the sole criterion for completion of the Contractor's work and eligibility for payment/s.			
Delivery place / terms (INCOTERMS 2020)	DDP Chisinau DDP Balti DDP Soroca			
	As per each LOT beneficiary institutions' addresses:			
	#	The beneficiary institution	Location/Address	
	1	Center for Continuing Education of the Technical University of Moldova	UTM, Facultatea Energetica si Inginerie Electrica, Moldova, Chisinau, str. 31 August 1989, 78, of. 2-202	
	2	Center of Excellence in Construction	Moldova, Chisinau, str. Gheorghe Asachi, 71	
	3	Chisinau Technological College	Moldova, Chisinau, str. Bogdan Voievod 8/1	

	4	Soroca Agriculture Technical College	Moldova, Soroca, str. Calea Baltului 2
	5	Balti Polytechnic College	Moldova, Balti, str. Ivan Franco nr. 11
Customs clearance (must be linked to INCOTERM)	Shall be done by: <input checked="" type="checkbox"/> Supplier/Bidder UNDP is available to provide support to the contractor with required documents necessary for customs clearance and VAT payment exemption, if needed.		
Packing requirements	N/A		
Mode of transport	Any		
Installation Requirements	As per specifics of delivered equipment.		
Testing Requirements	On site		
Scope of Training on Operation and Maintenance	Training is required at the premises of the beneficiary institutions. The trainings should be held during the workweek, after the delivery of the equipment to the addresses stated in this ITB. Training should be provided by the company's trainer(s). Training will focus on the procedures for using the delivered equipment, the security techniques and the appropriate maintenance and operation procedures. Training should last one day for each beneficiary institution. The End User is responsible for organizing training premises. The Supplier should cover trainers fee, travel costs to and from Moldova, accommodation costs during the training as well as the transportation costs from Chisinau to beneficiaries for trainer(s). UNDP will organize translation, if needed. Thus, for the trainings within the Technical University of Moldova, a minimum of 10 people will be trained, for the Agricultural Technical College from Soroca at least 5 people, for the Balti Polytechnic College at least 8 people, the Chisinau Technological College at least 3 people and for the Center of Excellence in Construction at least 5 people.		
Commissioning	Required		
Warranty Period	The supplier shall cover all equipment under warranty for any material defects, defects in workmanship and premature failures under normal use and service, for a period of minimum twelve (12) months from the date of delivery and goods acceptance. The supplier shall repair or replace any defective equipment or parts throughout the warranty period and cover any related cost. After delivery and acceptance of equipment the Supplier shall provide a warranty certificate or similar issued to the beneficiary institution.		
Local Service Support	The Contractor must provide a list of at least one authorized representative located in Moldova or neighbouring countries. For the local/regional representative, the Contractor should indicate the web page, telephone, email address and headquarters.		
Technical Support Requirements	The Selected Bidder shall provide the following online and offline methods of technical support: On-site support and/or online support including answering technical queries online (email and telephonic) when feasible and needed. Turnaround time for answering queries will be less than three (3) days. In case on site support is needed it needs to be provided within 20 days from the moment of beneficiary's notification.		
After-sale services Requirements	<input checked="" type="checkbox"/> Warranty on Parts and Labor for minimum period of twelve (12) months <input checked="" type="checkbox"/> Technical Support		
Payment Terms	100% within 30 days upon UNDP's acceptance of the goods delivered as specified and receipt of invoice		
Conditions for Release of Payment	<input checked="" type="checkbox"/> Inspection upon arrival at destination <input checked="" type="checkbox"/> Installation <input checked="" type="checkbox"/> Testing <input checked="" type="checkbox"/> Training on Operation and Maintenance <input checked="" type="checkbox"/> Written Acceptance of Goods based on full compliance with ITB requirements		

All documentations, including catalogues, instructions and operating manuals, shall be in this language	<input checked="" type="checkbox"/> English; <input checked="" type="checkbox"/> Others: Russian, Romanian
---	--

SECTION 6: CONDITIONS OF CONTRACT AND CONTRACT FORMS

6.1 General Conditions of Contract

In the event of a Contract, the following General Conditions of Contract (GCC) will apply:

UNDP General Terms and Conditions for Contracts.

The conditions are available at: <http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html>

6.2 Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and/or amend the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

Liquidated Damages will be imposed as follows:

Percentage of contract price per week of delay: 2.5% up to a maximum of 10% of the Contract value, after which UNDP may terminate the contract.

6.3 Contract Form

In the event of an award, the following sample Contract will be used:

Contract for Goods and/or Services to UNDP.

The conditions are available at: <http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html>

SECTION 7: BIDDING FORMS

Form A: Bid Confirmation

Form B: Checklist

Form C: Bid Submission

Form D: Bidder Information

Form E: Joint Venture / Consortium / Association Information

Form F: Eligibility and Qualification

Form G: Technical Bid

Form H: Price Schedule

Form I: Bid Security *[scanned copy included in online submission and original submitted not later than 10 (ten) days after the submission deadline at the address indicated in Section 3 above] [in case Bidder applies for three (3) lots]*

FORM A: BID CONFIRMATION

Please acknowledge receipt of this ITB by completing this form and returning it by email to the address, and by the date specified, in the Letter of Invitation.

To: Insert name of contact person

Email: Insert contact person's email - do not enter secure bid email address

From: Insert name of bidder

Subject ITB reference [Click or tap here to enter text.](#)

Check the appropriate box	Description
<input type="checkbox"/>	YES , we intend to submit a bid.
<input type="checkbox"/>	NO . We are unable to submit a competitive offer for the requested goods/works/services at the moment

If you selected NO above, please state the reason(s) below:

Check applicable	Description
<input type="checkbox"/>	The requested goods/services are not within our range of supply
<input type="checkbox"/>	We are unable to submit a competitive offer for the requested products at the moment
<input type="checkbox"/>	The requested products are not available at the moment
<input type="checkbox"/>	We cannot meet the requested specifications
<input type="checkbox"/>	We cannot offer the requested type of packing
<input type="checkbox"/>	We can only offer FCA prices
<input type="checkbox"/>	The information provided for bidding purposes is insufficient
<input type="checkbox"/>	Your ITB is too complicated
<input type="checkbox"/>	Insufficient time is allowed to prepare a bid
<input type="checkbox"/>	We cannot meet the delivery requirements
<input type="checkbox"/>	We cannot adhere to your terms and conditions e.g. payment terms, request for performance security, etc.. Please provide details below.
<input type="checkbox"/>	Sustainability criteria/requirements are too stringent (if applicable)
<input type="checkbox"/>	We do not export
<input type="checkbox"/>	We do not sell to the UN
<input type="checkbox"/>	Your volume is too small and does not meet our order quantity
<input type="checkbox"/>	Our production capacity is currently full
<input type="checkbox"/>	We are closed during the holiday season
<input type="checkbox"/>	We had to give priority to other clients' requests
<input type="checkbox"/>	We do not sell directly but through distributors
<input type="checkbox"/>	We have no after-sales service available
<input type="checkbox"/>	The person handling the bids is away from the office
<input type="checkbox"/>	Other (please provide reasons below):
Further information: Click or tap here to enter text.	
<input type="checkbox"/>	We would like to receive future ITBs for this type of goods
<input type="checkbox"/>	We don't want to receive ITBs for this type of goods

Questions to the bidder concerning the reasons for NO BID should be addressed to [Click or tap here to enter text.](#) phone [Click or tap here to enter number.](#), email [Click or tap here to enter text.](#)

FORM B: CHECKLIST

This form serves as a checklist for preparation of your bid. Please complete the returnable bidding forms in accordance with the instructions and return them as part of your bid submission: No alteration to the format of forms shall be permitted and no substitution shall be accepted.

Before submitting your bid, please ensure compliance with the instructions in Section 2: Instructions to Bidders and Section 3: Data Sheet.

Technical bid:

Have you duly completed all the returnable bidding forms?	
▪ Form C: Bid Submission	<input type="checkbox"/>
▪ Form D: Bidder Information	<input type="checkbox"/>
▪ Form E: Joint Venture/Consortium/Association Information	<input type="checkbox"/>
▪ Form F: Eligibility and Qualification	<input type="checkbox"/>
▪ Form G: Technical Bid/Bill of Quantities	<input type="checkbox"/>
▪ Form I: Bid Security <i>[scanned copy included in online submission and original submitted not later than 10 (ten) days after the submission deadline at the address indicated in Section 3 above] [in case Bidder applies for three (3) lots]</i>	<input type="checkbox"/>
Have you provided the required documents to establish compliance with the evaluation criteria in Section 4?	<input type="checkbox"/>
Have you provided the required documents in support of Form D: Bidder Information?	<input type="checkbox"/>

Price Schedule:

▪ Form H: Price Schedule	<input type="checkbox"/>
--------------------------	--------------------------

FORM C: BID SUBMISSION

Name of bidder:	Click or tap here to enter text.	Date:	Click or tap to enter a date.
ITB reference:	Click or tap here to enter text.		

We, the undersigned, offer to supply the goods and related services required for Click or tap here to enter text.in accordance with your Invitation to Bid No. Click or tap here to enter text.. We hereby submit our bid, which includes this Technical Bid and Price Schedule.

The total price of our bid, excluding any discounts offered below as per the total amount indicated directly in our response in the system.

The discounts offered and the methodology of their application are:

- **Discounts:** If our bid is accepted, the following discounts shall apply Specify in detail each discount offered and the specific item of the Schedule of Requirement to which it applies, including if applicable discounts for accelerated payment.
- **Methodology of application of the discounts:** The discounts shall be applied using the following method: Specify in detail the method that shall be used to apply the discounts

Bidder Declaration: on behalf of our firm, its affiliates, subsidiaries and employees, including any JV / Consortium / Association members or subcontractors or suppliers for any part of the contract.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Requirements and Terms and Conditions: I/We have read and fully understand the ITB, including the ITB Information and Data Sheet, Schedule of Requirements, the General Conditions of Contract and any Special Conditions of Contract. I/we confirm that the bidder agrees to be bound by them.
<input type="checkbox"/>	<input type="checkbox"/>	I/We confirm that the bidder has the necessary capacity, capability and necessary licenses to fully meet or exceed the requirements and will be available to deliver throughout the relevant contract period.
<input type="checkbox"/>	<input type="checkbox"/>	Ethics: In submitting this bid I/we warrant that the bidder: has not entered into any improper, illegal, collusive or anti-competitive arrangements with any competitor; has not directly or indirectly approached any representative of the buyer (other than the point of contact) to lobby or solicit information in relation to the ITB; has not attempted to influence, or provide any form of personal inducement, reward or benefit to any representative of the buyer.
<input type="checkbox"/>	<input type="checkbox"/>	I/We confirm to undertake not to engage in proscribed practices, or any other unethical practice, with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN and we have read the United Nations Supplier Code of Conduct : https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN.
<input type="checkbox"/>	<input type="checkbox"/>	Conflict of interest: I/We warrant that the bidder has no actual, potential or perceived conflict of Interest in submitting this bid, or entering into a contract to deliver the requirements. Where a conflict of interest arises during the ITB process the bidder will report it immediately to the Procuring Organisation's Point of Contact.
<input type="checkbox"/>	<input type="checkbox"/>	Prohibitions, Sanctions: I/We hereby declare that our firm, ultimate beneficial owners, its affiliates or subsidiaries or employees, including any JV/Consortium members or subcontractors or suppliers for any part of the contract is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists and have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group.
<input type="checkbox"/>	<input type="checkbox"/>	I/We do not employ, or anticipate employing, any person(s) who is, or has been a UN staff member within the last year, if said UN staff member has or had prior professional dealings with our firm in his/her capacity as UN staff member within the last three years of service with the UN (in accordance with UN post-employment restrictions published in ST/SGB/2006/15);
<input type="checkbox"/>	<input type="checkbox"/>	Bankruptcy: I/We have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future.
<input type="checkbox"/>	<input type="checkbox"/>	Bid Validity Period: I/We confirm that this bid, including the price, remains open for acceptance for the bid validity period.
<input type="checkbox"/>	<input type="checkbox"/>	I/We understand and recognize that you are not bound to accept any bid you receive and we certify that the goods offered in our bid are new and unused.
<input type="checkbox"/>	<input type="checkbox"/>	By signing this declaration, the signatory below represents, warrants and agrees that he/she has been authorised by the Organisation/s to make this declaration on its/their behalf.

Name: _____

Title: _____

Date: _____

Signature: _____

[Stamp with official stamp of the bidder]

FORM D: BIDDER INFORMATION

ITB Reference	Click or tap here to enter text.
Legal name of bidder	Click or tap here to enter text.
Legal Address, City, Country	Click or tap here to enter text.
Website	Click or tap here to enter text.
Year of registration	Click or tap here to enter text.
Bidder's Authorized Representative information	Name and Title: Click or tap here to enter text. Telephone numbers: Click or tap here to enter text. Email: Click or tap here to enter text.
Legal structure	Choose an item.
Organisational type	Choose an item.
Current Licenses, if any, and permits (with dates, numbers and expiration dates)	Click or tap here to enter text.
No. of full-time employees	Click or tap here to enter number.
No. of staff involved in similar supply contracts	Click or tap here to enter number.
Are you a UNGM registered vendor?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, insert UNGM Vendor Number
Years of supplying to UN organisations	Click or tap here to enter text.
Are you a UNDP vendor?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, insert Vendor Number
Countries of operation	Click or tap here to enter text.
Subsidiaries in the region (please indicate names of subsidiaries and addresses, if relevant to the bid)	Click or tap here to enter text.
Commercial Representatives in the country: Name/Address/Phone (for international companies only)	Click or tap here to enter text.
Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate):	Click or tap here to enter text.
Presence and characteristics of in-house quality control laboratory (if relevant to bid)	Click or tap here to enter text.
Does your Company have a corporate environmental policy or environmental management system such as ISO 14001 or ISO 14064 or equivalent?	<p>Tick all that apply and provide supporting documentation.</p> <p><input type="checkbox"/> Corporate Environmental Policy</p> <p><input type="checkbox"/> ISO 14001</p>

	<input type="checkbox"/> ISO 14064 <input type="checkbox"/> Other, specify Click or tap here to enter text.
<p>Does your organization demonstrate significant commitment to sustainability, including the following aspects that have been identified in the UN Sustainable Procurement Framework?</p> <ul style="list-style-type: none"> • Environmental: prevention of pollution, sustainable resources; climate change and mitigation and the protection of the environment, biodiversity. • Social: human rights and labour issues, gender equality, sustainable consumption, and social health and wellbeing. • Economic: whole life cycle costing, local communities and small or medium enterprises, and supply chain sustainability. 	<p>Attach a formal statement that outlines your organisation's commitment to sustainability, where possible providing evidence of tangible results that demonstrate progress such as:</p> <p>Tick all that are attached:</p> <p><input type="checkbox"/> Formal statement</p> <p><input type="checkbox"/> Sustainability report</p> <p><input type="checkbox"/> UN Global Compact Communication on Progress</p> <p><input type="checkbox"/> Other, specify Click or tap here to enter text.</p>
<p>Does your company belong to a diverse supplier group including micro, small or medium sized enterprise, women or youth owned business or other?</p> <p><i>(If yes, please provide details and documentation)</i></p>	<p>Click or tap here to enter text.</p>
<p>Is your company a member of the UN Global Compact</p>	<p>Choose an item.</p> <p>If yes, please provide a link to your Global Compact profile:</p> <p>Click or tap here to enter text.</p>
<p>Bank Information</p>	<p>Bank Name: Click or tap here to enter text.</p> <p>Bank Address: Click or tap here to enter text.</p> <p>IBAN: Click or tap here to enter text.</p> <p>SWIFT/BIC: Click or tap here to enter text.</p> <p>Account Currency: Click or tap here to enter text.</p> <p>Bank Account Number: Click or tap here to enter text.</p>
<p>Contact person that Click or tap here to enter text. may contact for requests for clarifications during bid evaluation</p>	<p>Name and Title: Click or tap here to enter text.</p> <p>Telephone numbers: Click or tap here to enter text.</p> <p>Email: Click or tap here to enter text.</p>
<p>Please attach the following documents:</p>	<ul style="list-style-type: none"> ▪ Bid Submission (as per Form C) ▪ Bidder Information (as per Form D) ▪ Company Profile, which should not exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods/works being procured ▪ Certificate of Incorporation/ Business Registration ▪ Certified details of the ownership of the Bidder company (including each member of a JV consortium), providing the percentage ownership, share or stockholding of each party with an interest

	<p>exceeding 5% of the company ownership (or Annex 1 to Business Registration Certificate – for local companies)</p> <ul style="list-style-type: none"> ▪ Tax Registration/Payment Certificate issued by the Internal Revenue Authority evidencing that the Bidder is updated with its tax payment obligations, or Certificate of Tax exemption, if any such privilege is enjoyed by the Bidder ▪ Certified Letter of Appointment and power of attorney authorizing the representative of the Bidder to sign bids committing the Bidder and his joint venture partners (if any) to engagement for the Contract ▪ Official Letter of Appointment as local representative, if Bidder is submitting a Bid on behalf of an entity located outside the country ▪ Joint Venture / Consortium / Association Information (as per Form E), if applicable ▪ Evidence of the capacities, capabilities and reputation of the JV partners/Subcontractors (if any) should meet respective requirements listed in Section 4 ▪ Eligibility and Qualification (as per Form F) ▪ The latest Audited Financial Statement (Income Statement and Balance Sheet) including Auditor's Reports (for international companies) or registered Financial Report at the Statistical Bureau (for local companies) for the past 3 (three) years for the Bidder (2019-2021) ▪ Details of Previous Relevant Experience within the last three (3) years, indicating the Beneficiary name and contact details, scope of contract, contract amount and period of contract execution ▪ Copies of signed contracts and/or any other prove of successful completion of delivery of goods/provision of services included under similar experience (as required in Section 4) ▪ At least 3 Clients' statements confirming satisfactory performance by the Bidder, each JV partner/Subcontractor (if the case), on the three contracts of highest value carried out, during the past three (3) years, by each intended participant ▪ Technical Bid (as per Form G) ▪ Adequate technical documentation, certificates of conformity and/or quality, catalogue (s) and other printed material or information pertinent to the equipment according to LOT applied ▪ Schedule of activities/work indicating duration and key dates for each stage ▪ List of qualified key personnel/specialists (operation and maintenance trainer(s)), together with CVs and professional certificates (valid at the date of presentation) indicating professional qualifications, experience in the field of training and use of the delivered equipment (as required in Section 4 above) ▪ Evidence of the Bidder's Environmental and Social Management capability by submitting a plan which will ensure that all identified negative biological, physical and/or socio-economic impacts are minimized, mitigated or reversed ▪ Quality Certificate (e.g., ISO, etc.) and/or other similar certificates, accreditations, awards and citations received by the Bidder, if any ▪ Duly filled-in Price Schedule (as per Form H) ▪ Environmental Compliance Certificates, Accreditations, Markings/Labels, and other evidences of the Bidder's practices which contributes to the ecological sustainability and reduction of adverse environmental impact (e.g., use of non-toxic substances, recycled raw materials, energy-efficient equipment, reduced carbon emission, etc.), either in its business practices or in the goods it manufactures
--	---

	<ul style="list-style-type: none"> ▪ Certificates of quality and origin for the offered goods, materials and accessories (where applicable), if any ▪ Equipment warranty certificates for at least twelve (12) months from the date of delivery ▪ Certification or authorization to act as Agent on behalf of the Manufacturer, or Power of Attorney (if Supplier is not the manufacturer) ▪ Export Licenses, if applicable ▪ Bid Security (as per Form I) – submitted in original not later than 10 days after the submission deadline from tender deadline at the address indicated in Section 3 above
--	---

FORM E: JOINT VENTURE/CONSORTIUM/ASSOCIATION INFORMATION

Name of bidder:	Click or tap here to enter text.	Date:	Click or tap to enter a date.
ITB reference:	Click or tap here to enter text.		

To be completed and returned with your bid if the bid is submitted as a Joint Venture/Consortium/Association.

No	Name of Partner and contact information <i>(address, telephone numbers, fax numbers, e-mail address)</i>	Proposed proportion of responsibilities (in %) and type of goods, works and/or services to be performed
1	Click or tap here to enter text.	Click or tap here to enter text.
2	Click or tap here to enter text.	Click or tap here to enter text.
3	Click or tap here to enter text.	Click or tap here to enter text.

Name of leading partner (with authority to bind the JV, Consortium, Association during the ITB process and, in the event a Contract is awarded, during contract execution)	Click or tap here to enter text.
--	----------------------------------

We have attached a copy of the below referenced document signed by every partner, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture:

☐ Letter of intent to form a joint venture **OR** ☐ JV/Consortium/Association agreement

We hereby confirm that if the contract is awarded, all parties of the Joint Venture/Consortium/Association shall be jointly and severally liable to Click or tap here to enter text for the fulfilment of the provisions of the Contract.

Name of partner:

Signature: _____

Date: _____

Name of partner:

Signature: _____

Date: _____

Name of partner:

Signature: _____

Date: _____

Name of partner:

Signature: _____

Date: _____

FORM F: ELIGIBILITY AND QUALIFICATION FORM

Name of bidder:	Click or tap here to enter text.	Date:	Click or tap to enter a date.
ITB reference:	Click or tap here to enter text.		

If JV/Consortium/Association, to be completed by each partner.

History of Non- Performing Contracts

<input type="checkbox"/> No non-performing contracts during the last 3 years			
<input type="checkbox"/> Contract(s) not performed in the last 3 years			
Year	Non- performed portion of contract	Contract Identification	Total Contract Amount (current value in US\$)
		Name of Client: Address of Client: Reason(s) for non-performance:	

Litigation History (including pending litigation)

<input type="checkbox"/> No litigation history for the last 3 years			
<input type="checkbox"/> Litigation History as indicated below			
Year of dispute	Amount in dispute (state currency)	Contract Identification	Total Contract Amount (state currency)
		Name of Client: Address of Client: Matter in dispute: Party who initiated the dispute: Status of dispute: Party awarded if resolved:	

Previous Relevant Experience

Please list only previous similar assignments successfully completed in the last three (3) years.

List only those assignments for which the bidder was legally contracted or sub-contracted by the Client as a company or was one of the Consortium/JV partners. Assignments completed by the bidder's individual experts working privately or through other firms cannot be claimed as the relevant experience of the bidder, or that of the bidder's partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The bidder should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested.

Project name & Country of Assignment	Client & Reference Contact Details	Contract Value	Period of activity and status	Types of activities undertaken and role (Contractor, sub-contractor or consortium member)

Bidders may also attach their own Project Data Sheets with more details for assignments above.

☐ Attached are the Statements of Satisfactory Performance from the Top 3 (three) Clients or more.

Financial Standing

Annual Turnover for the last 3 years	2019	USD	Amount
	2020	USD	Amount
	2021	USD	Amount
Latest Credit Rating (if any), indicate the source and date.			

Financial information (state currency)	Historic information for the last 3 years		
	2019	2020	2021
	<i>Information from Balance Sheet</i>		
Total Assets (TA)			
Total Liabilities (TL)			
Current Assets (CA)			
Current Liabilities (CL)			
	<i>Information from Income Statement</i>		
Total / Gross Revenue (TR)			
Profits Before Taxes (PBT)			
Net Profit			
Current Ratio (current assets/current liabilities)			

☐ Attached are copies of the audited financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following condition:

- Must reflect the financial situation of the bidder or party to a JV, and not sister or parent companies;
- Historic financial statements must be audited by a certified public accountant;
- Historic financial statements must correspond to accounting periods already completed and audited. No statements for partial periods shall be accepted.

FORM G: TECHNICAL BID

Name of bidder:	Click or tap here to enter text.	Date:	Click or tap to enter a date.
ITB reference:	Click or tap here to enter text.		

The Bidder's Bid should be organized to follow this format of the Technical Bid. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same will be viewed as non-responsive.

SECTION 1: Bidder's qualification, capacity and expertise

- 1.1 General organizational capability which is likely to affect implementation: management structure, financial stability and project financing capacity, project management controls, extent to which any work would be subcontracted (if so, provide details).
- 1.2 Relevance of specialized knowledge and experience on similar engagements done in the region/country.
- 1.3 Quality assurance procedures and risk mitigation measures.
- 1.4 Organization's commitment to sustainability.

SECTION 2: Scope of Supply, Technical Specifications, and Related Services

This section should demonstrate the Bidder's responsiveness to the specification by identifying the specific components proposed, addressing the requirements, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; and demonstrating how the proposed bid meets or exceeds the requirements/specifications. All important aspects should be addressed in sufficient detail.

- 2.1 A detailed description of how the Bidder will deliver the required goods and services, keeping in mind the appropriateness to local conditions and project environment. Details how the different service elements shall be organized, controlled and delivered.
- 2.2 Explain whether any work would be subcontracted, to whom, how much percentage of the requirements, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
- 2.3 The bid shall also include details of the Bidder's internal technical and quality assurance review mechanisms.
- 2.4 Implementation plan including a Gantt Chart or Project Schedule indicating the detailed sequence of activities that will be undertaken and their corresponding timing.
- 2.5 Demonstrate how you plan to integrate sustainability measures in the execution of the contract.

Goods, works and/or services to be Supplied and Technical Specifications	Bidder's response				
	Compliance with technical specifications		Delivery Date <i>(confirm that you comply or indicate your delivery date)</i>	Quality Certificate/Export Licenses, etc. <i>(indicate all that apply and attach)</i>	Comments
	Yes, we comply	No, we cannot comply <i>(indicate discrepancies)</i>			
Equipment as per LOT 1					
Equipment as per LOT 2					

Equipment as per LOT 3					
------------------------	--	--	--	--	--

Other Related services and requirements <i>(based on the information provided in Section 5)</i>	Compliance with requirements		Details or comments on the related requirements
	Yes, we comply	No, we cannot comply <i>(indicate discrepancies)</i>	
Delivery Terms			
Installation Requirements			
Testing Requirements			
Scope of Training on Operation and Maintenance			
Commissioning			
Warranty Period			
Local Service Support			
Technical Support Requirements			
After-sale services Requirements			
Payment Terms			
All documentations, including catalogues, instructions and operating manuals, shall be in this language			

Additionally, the Bidder shall fill in the detailed Technical Responsiveness Table as below.

Technical Responsiveness Table

Bidders shall provide all the applicable data of the equipment offered, failing to do so may result in the bid being rejected. Corresponding documentation shall form part of the bidder's offer.

LOT 1 - Tools and electrical equipment for training

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	√ YES	√ NO	Technical Compliance Please provide details /description of offered feature)
1	Drill drivers with battery	tool	Accumulator: 2x2.0Ah Battery type: Li-Ion Complete set: 2 batteries + suitcase Idling speed:1300 min-1 Power type: Accumulator Max. diameter drilling steel: 10 mm Max. diameter wood drilling: 20 mm	Technological College from Chisinau			
2	Transformer electronic	electrical equipment	Power (W): 150 W Voltage (V): 230 V Output voltage (V): 12 V	Technological College from Chisinau			
3	Transformer for LED strip	electrical equipment	Power (W): 360 W Voltage (V): 220 - 240 V Current (A): 30 A Output voltage (V): DC 12V	Technological College from Chisinau			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
4	RGB LED amplifier	electrical equipment	Power (W): 288 W Voltage (V): 12 V Current (A): 24 A Degree of protection (IP): IP20	Technological College from Chisinau			
5	RGB controller with remote	electrical equipment	Power (W): 72 W Voltage (V): 12 V Current (A): 2 A Degree of protection (IP): IP20 Options: Multifunctional Completion: AC adapter	Technological College from Chisinau			
6	Freon charging station	tool	Charging Station Complete R134a Steel frame construction with Vacuum pump: RL-4 Vacuum gauge: 19800-SV Bellow gauges: oil-filled, Ø 60 Valves for connection of refrigeration systems and refrigerant-supply line	Technological College from Chisinau			
7	Manifold (2-way manifold with Bourdon Type)	tool	Number of Ways: 2-way Type: Bourdon-type Accuracy Class: 1.6 Nominal Size: 68 Oil-filled: No Zero Point Adjustment: Yes Pressure Scale: bar psi Refrigerant(s): R134a R404A R507 Ball Valve: No	Technological College from Chisinau			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			Scope of Supply: 3 Charging hoses Packaging: Sturdy plastic case				
8	Pipe rolling device	tool	Tube Material - Copper; Aluminum; Plastics	Technological College from Chisinau			
9	Refrigeration socket set inch sizes	tool	Number of Pieces: 21 Scope of Supply: Ratchet Intermediate piece 1/4" / 1/4" Extension 15.5 mm Special nut Cross handle Cardan joint Transition piece outside Transition piece inside Various inserts Packaging: Sturdy plastic case Material: Stainless steel LDPE	Technological College from Chisinau			
10	Refrigeration socket set	tool	Number of Pieces: 20 Packaging: Sturdy plastic case Material: Stainless steel LDPE	Technological College from Chisinau			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
11	Torque wrench set in a handy case	tool	Torque adjustable from 10 to 75 Nm Key widths: 17, 19, 22, 24, 26, 27, 29 mm	Technological College from Chisinau			
12	Screwdriver set	tool	10-piece screwdriver set made of chrome vanadium steel with non-slip handle	Technological College from Chisinau			
13	LED projector with solar battery	electrical equipment	Power (W): 60 W Color temperature (K): 6400 K Luminous flux (lm): 1040 lm Protection (IP): IP65	Polytechnic College Balti			
14	LED street lighting body with solar panel	electrical equipment	Power (W): 60 W Color temperature (K): 6500 K Voltage (V): 6V/10W Luminous flux (lm): 6000 lm Protection (IP): IP65	Polytechnic College Balti			
15	Sensor day/night	electrical equipment	Power (W): 1200 W Voltage (V): 220 - 240 V Protection (IP): IP44 Form type: Indoor Type: Radar Lighting level (lux): 50	Polytechnic College Balti			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
16	Motion sensor	electrical equipment	Power (W): 1000 W Voltage (V): 220 - 240 V Form type: Outside Protection (IP): IP20 Type: Infrared Ambient temperature during operation: up to 24°C Options: 2 adjustable buttons (Time, luxury) Angle (degrees): 360° Distance (m): 8 m Lighting level (lux): 2000 Actuation duration (time): From 5 sec to 8/12 min	Polytechnic College Balti			
17	Digital timer socket	electrical equipment	Power (W): 3680 W Voltage (V): 230 V Current (A): 16 A Protection (IP): IP20 Type: programmable	Polytechnic College Balti			
18	LED projector	electrical equipment	Power (W): 50 W Color temperature (K): 6500 K Voltage (V): 220 - 240 V Protection (IP): IP65	Polytechnic College Balti			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
19	Analog programmable switch	electrical equipment	Power supply: 230 V ~ - 50/60 Hz Front panel 3-position "ON-AUTO-OFF" boost switch Manual switch to summer / winter time 1 output 16 A - 250 V ~ - $\mu \cos = 1$ Daily schedule 1 segment = 15 minutes Accuracy: ± 5 minutes Vertical keyboard With a power reserve of 100 hours Number of modules: 1	Polytechnic College Balti			
20	Electronic socket timer	electrical equipment	Operating temperature range, °C: 0 ... + 40 Rated operating voltage U _e , V: 230 Rated frequency, Hz: 50 Rated current I _n , A: 8A (AC1) Characteristic: Maximum number of V / O cycles per day / week: 140; The minimum step of setting the operating time: 1 min; Battery life: at least 150 hours	Polytechnic College Balti			
21	Mechanical time relay (programmable 24h analogue socket)	electrical equipment	Power supply: 230V AC / 50Hz Nominal load: 3500 W / 16 A Mode: 24 hours	Polytechnic College Balti			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
22	Wi-fi smart socket	electrical equipment	Current (A): 16 A Voltage (V):250 V Frequency (Hz): 50...50 Hz Earthing: Yes Number of sockets - 1 With On/Off switch - Yes Protection (IP) - IP20	Polytechnic College Balti			
23	Smart switch	electrical equipment	Size: 80mm*80mm*40mm Maximum voltage: 250 V Total nominal load: 2000 W Maximum current: 5 A Own consumption: less than 0.1mW Type: Wall Light Dimmer Switch, with light dimmer - changes the intensity of the light	Polytechnic College Balti			
24	Unitary socket outdoor	electrical equipment	Current intensity: 16A Voltage (V): 220V Socket with child protection: Yes Mounting Type: Apparent Degree of protection (IP): IP44 Grounded: Yes	Polytechnic College Balti			
25	External unitary switch	electrical equipment	Destination: Outside Voltage (V): 230 V Current (A): 10 A Protection (IP): IP44 Frequency: 50 Hz	Polytechnic College Balti			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
26	External double switch	electrical equipment	Voltage (V): 250 V Current (A): 10A Degree of protection (IP): IP44 Type: Hermetic Frequency: 50 Hz	Polytechnic College Balti			
24	UZO automatic switch	electrical equipment	Model: VD1-63 Current intensity: 25A Number of poles: 2 Ambient temperature during operation: from -40°C to +50°C Nominal leakage current: 30mA . Degree of protection (IP): IP20	Polytechnic College Balti			
28	Automatic switch	electrical equipment	Voltage (V): 230 - 400V Current (A): 16 A No. Poles: 1P Car. electromagnetic release: C	Polytechnic College Balti			
29	Low voltage arrester	electrical equipment	Voltage (V): 400 V Current (A): 20 kA No. Poles: 2P Car. electromagnetic release: C	Polytechnic College Balti			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
30	Photorele	electrical equipment	Power (W): 1100 W Voltage (V): 220 - 240 V Form type: Indoor Degree of protection (IP): IP44 Type: Radar Ambient temperature during operation: from -25°C to +40°C Options: 1 adjustable button (lux) Fixing method: Fixing support Lighting level (lux): 50	Polytechnic College Balti			
31	Contactor	electrical equipment	Voltage (V): 220 V Current (A): 9 A Protection (IP): IP20 Frequency: 50 Hz	Polytechnic College Balti			
32	Electric motor	electrical equipment	Power (W): 1.1 kW Voltage (V): 220/380 V Degree of protection (IP): IP54 Type: Asynchronous Frequency: 50 Hz Idling speed: 1000 rpm Attachment method: Sole Mode: S1 Basket ϕ : 0.71 Number of phases: Three-phase	Polytechnic College Balti			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
33	Contactor	electrical equipment	Voltage (V): 380 V Current (A): 65 A Degree of protection (IP): IP20 Type: 1NO+1NC No. Poles: 3P Frequency: 50/60 Hz	Polytechnic College Balti			
34	Distribution box	electrical equipment	Dimensions (L x W x H x Ø) - 100 x 100 x 45 mm Material type - Plastic	Polytechnic College Balti			
35	Outdoor automotive box	electrical equipment	The quantity of automatic switches: 1-16 pieces Installation mode: External Degree of protection: IP20	Polytechnic College Balti			
36	Electrician tools set	tool	Professional electrician tool set of 68 specially selected tools. The straps and screwdrivers in the kit are insulated up to 1000V	Polytechnic College Balti			
37	Assembly table	laboratory table	Leg height 22300mm Metal shelf 1330x3000mm Perforated wall 1330x3000mm	Polytechnic College Balti			
38	LED street lighting body with solar panel	electrical equipment	Power (W): 90 W Color temperature (K): 6500 K Voltage (V) : 6V/14W Luminous flux (lm): 9000 lm Degree of protection (IP) - IP65	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
39	LED street lighting body with solar panel	electrical equipment	Power (W): 50 W Average lifetime (h): 12-15 h Color temperature (K): 6400 K Luminous flux (lm): 950 lm Degree of protection (IP): IP65	IP Agricultural Technical College from Soroca			
40	Support for street lighting body	electrical equipment	Dimensions (L x W x H x Ø) - 300 x 40 mm Material type: Metal	IP Agricultural Technical College from Soroca			
41	Single-phase electric meter	electrical equipment	Voltage (V): 220 V Current (A): 40 A Type: Digital Number of phases: Single phase	IP Agricultural Technical College from Soroca			
42	Three-phase electric meter	electrical equipment	Voltage (V): 230 - 400V Current (A): 5 - 100 A Degree of protection (IP): IP20 Type: Digital Number of phases: Three-phase	IP Agricultural Technical College from Soroca			
43	Electric cable	electrical equipment	Color: Black Material type: Copper Number of threads: 3 Type: PVS Section: 1.5 mm ²	IP Agricultural Technical College from Soroca			
44	Electric cable	electrical equipment	Model: PVS White: color Material type: Copper Number of threads: 3 Section: 1.5 mm ²	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
45	Electric cable	electrical equipment	Color: Black Material type: Copper Number of threads: 3 Type: PVS Section: 2.5 mm ²	IP Agricultural Technical College from Soroca			
46	Voltage stabilizer	electrical equipment	Power (W): 1200 W Voltage (V): 140 - 275 V	IP Agricultural Technical College from Soroca			
47	Voltage stabilizer	electrical equipment	Power (W): 4 kW Voltage (V): 220/230 V	IP Agricultural Technical College from Soroca			
48	Single-phase inverter	electrical equipment	Power (W): 1.5 kW Voltage (V): 220 - 240 V Degree of protection (IP): IP20 Number of phases: Single phase	IP Agricultural Technical College from Soroca			
49	Inverter 220 V	electrical equipment	Power (W): 2000 W Voltage (V): 12 V Output voltage (V): 220 V	IP Agricultural Technical College from Soroca			
50	Three-phase electric motor	electrical equipment	Power (W): 0.37 kW Voltage (V): 220/380 V Degree of protection (IP): IP55 Frequency: 50 Hz Idling speed: 1000 rpm Grip method: Sole Shaft size (Ø x L): 14 x 30 mm Mode: S1 Basket φ: 0.70 Number of phases: Three-phase	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
51	Three-phase electric motor	electrical equipment	Power (W): 750 W Voltage (V): 380 V Degree of protection (IP): IP55 Type: Asynchronous Frequency: 50 Hz Idling speed: 3000 rpm Grip method: Sole Shaft size (Ø x L): 19 x 40 mm Regime: MS Basket φ: 0.83 Number of phases: Three-phase	IP Agricultural Technical College from Soroca			
52	Three-phase electric motor	electrical equipment	Power (W): 1.1 kW Voltage (V): 220/380 V Degree of protection (IP): IP55 Type: Asynchronous Frequency: 50 Hz Idling speed: 1500 rpm Grip method: Sole Shaft size (Ø x L): 24 x 50 mm Mode: S1 Number of phases: Three-phase	IP Agricultural Technical College from Soroca			
53	Electrician tools set	tool	Professional electrician tool set of 68 specially selected tools. The straps and screwdrivers in the kit are insulated up to 1000V	IP Agricultural Technical College from Soroca			
54	Tool set	tool	Material type - Chrome vanadium Pieces in set - 94	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
55	Photovoltaic plant for laboratory	electrical equipment	4 x 275W panels 1 x Inverter 1100W Aluminum fasteners Power cable 4-6mm Connections fitting	IP Agricultural Technical College from Soroca			
56	Assembly table	laboratory table	Leg height 22300mm Metal shelf 1330x3000mm Perforated wall 1330x3000mm	IP Agricultural Technical College from Soroca			
57	LED projector with the solar battery	electrical equipment	Power (W): 60 W Color temperature (K): 6400 K Luminous flux (lm): 1040 lm Protection (IP): IP65	IP Agricultural Technical College from Soroca			
58	Sensor day/night	electrical equipment	Power (W): 1200 W Voltage (V): 220 - 240 V Protection (IP): IP44 Form type: Indoor Type: Radar Lighting level (lux): 50	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
59	Motion sensor	electrical equipment	Power (W): 1000 W Voltage (V): 220 - 240 V Form type: Outside Protection (IP): IP20 Type: Infrared Ambient temperature during operation: up to 24°C Options: 2 adjustable buttons (Time, luxury) Angle (degrees): 360° Distance (m): 8 m Lighting level (lux): 2000 Actuation duration (time): From 5 sec to 8/12 min	IP Agricultural Technical College from Soroca			
60	Digital timer socket	electrical equipment	Power (W): 3680 W Voltage (V): 230 V Current (A): 16 A Protection (IP): IP20 Type: programmable	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
61	Analog programmable switch	electrical equipment	Power supply: 230 V ~ - 50/60 Hz Front panel 3-position "ON-AUTO-OFF" boost switch Manual switch to summer / winter time 1 output 16 A - 250 V ~ - $\mu \cos = 1$ Daily schedule 1 segment = 15 minutes Accuracy: ± 5 minutes Vertical keyboard With a power reserve of 100 hours Number of modules: 1	IP Agricultural Technical College from Soroca			
62	Electronic socket timer	electrical equipment	Operating temperature range, °C: 0 ... + 40 Rated operating voltage U _e , V: 230 Rated frequency, Hz: 50 Rated current I _n , A: 8A (AC1) Characteristic: Maximum number of V / O cycles per day / week: 140; The minimum step of setting the operating time: 1 min; Battery life: at least 150 hours.	IP Agricultural Technical College from Soroca			
63	Mechanical time relay (programmable 24h analogue socket)	electrical equipment	power supply: 230V AC / 50Hz nominal load: 3500 W / 16 A mode: 24 hours	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
64	Wi-fi smart socket	electrical equipment	Current (A): 16 A Voltage (V):250 V Frequency (Hz): 50...50 Hz Earthing: Yes Number of sockets - 1 With On/Off switch - Yes Protection (IP) - IP20	IP Agricultural Technical College from Soroca			
65	Unitary socket outdoor	electrical equipment	Current intensity: 16A Voltage (V): 220V Socket with child protection: Yes Mounting Type: Apparent Degree of protection (IP): IP44 Grounded: Yes	IP Agricultural Technical College from Soroca			
66	External unitary switch	electrical equipment	Destination: Outside Voltage (V): 230 V Current (A): 10 A Protection (IP): IP44 Frequency: 50 Hz	IP Agricultural Technical College from Soroca			
67	External double switch	electrical equipment	Voltage (V): 250 V Current (A): 10A Degree of protection (IP): IP44 Type: Hermetic Frequency: 50 Hz	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
68	UZO automatic switch	electrical equipment	Current intensity: 25A Number of poles: 2 Ambient temperature during operation: from -40°C to +50°C Nominal leakage current: 30mA Degree of protection (IP): IP20	IP Agricultural Technical College from Soroca			
69	Automatic switch	electrical equipment	Voltage (V): 230 - 400V Current (A): 16 A No. Poles: 1P Car. electromagnetic release: C	IP Agricultural Technical College from Soroca			
70	Photorele	electrical equipment	Power (W): 1100 W Voltage (V): 220 - 240 V Form type: Indoor Degree of protection (IP): IP44 Type: Radar Ambient temperature during operation: from -25°C to +40°C Options: 1 adjustable button (lux) Fixing method: Fixing support Lighting level (lux): 50	IP Agricultural Technical College from Soroca			
71	Distribution box	electrical equipment	Dimensions (L x W x H x Ø) - 100 x 100 x 45 mm Material type - Plastic	IP Agricultural Technical College from Soroca			
72	Generator gasoline 3 kW 220 V	electrical equipment	Output voltage (V) 220 V frequency 50 Hz Fuel type Benzine Rated power (W) 3kW	IP Agricultural Technical College from Soroca			

LOT II. Measurement and verification equipment for training

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
1	Combustion Analyzer for Commercial and Industrial Applications	M&V	<p>Operating temperature: 23° to 122 °F / -5 to +50 °C</p> <p>Housing: TPE PC</p> <p>Protection class: IP40</p> <p>Connectable probes: 1 x flue gas probe; 1 x temperature probe; 1 x differential pressure</p> <p>Display type: graphic Display</p> <p>User defined fuels: 10 user-defined fuels incl. test gas as fuel</p> <p>Pump flow: 0.6 l/min (regulated)</p> <p>Hose length: max. 7.8 m (corresponds to two probe hose extensions)</p> <p>Max. pos. press./flue gas: 0.725 psi / 50 mbar</p> <p>Max. neg. press./flue gas: -2.901 psi / -200 mbar</p> <p>Maximum: 100 folders</p> <p>Storage per folder: Max. 10 sites</p> <p>Storage per site: Max. 200 logs</p> <p>Miscellaneous: The max.</p>	Center of Excellence in Construction			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			number of logs is determined by the number of folders or sites Interface: Bluetooth®; USB; IR/IRDA interface; gas outlet; Mains connection; probe input/ probe inputs; Differential Pressure Storage temperature: -4° to 122 °F / -20 to +50 °C				
2	Infrared thermometer with laser marking	M&V	Measuring range: -22.0° to 752.0 °F / -30 to +400 °C Accuracy: ±2.7 °F or 1.5 % of mv (32.2° to 752.0 °F) / ±1.5 °C or ±1.5 % of mv (+0.1 to +400 °C) ±3.6 °F or ±2 % of mv (-22.0° to 32.0 °F) (the higher value applies) / ±2 °C or ±2 % of mv (-30 to 0 °C) (the higher value applies) Measuring rate: 0.5 sec	Center of Excellence in Construction			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			Infrared resolution: 0.1 °F / 0.1 °C				
3	Pressure and flow velocity measuring instrument	M&V	Measuring range: 0 to +800 InH ₂ O / 0 to +2000 hPa Accuracy: 0.5 % Fs Resolution: 1 InH ₂ O / 1 hPa Overload: ±1600 InH ₂ O / ±4000 hPa Operating temperature: 32° to 140 °F / 0 to +60 °C Measuring medium: All non-corrosive gases	Center of Excellence in Construction			
4	Light meter	M&V	Measuring range: 0 to 99999 Lux Accuracy: ±3 Lux or ±3 % (compared to reference instrument at 90° light irradiation) Resolution: 1 Lux (0 to 19999 Lux) 10 Lux (Remaining Range) Measuring rate: 0.5 sec	Center of Excellence in Construction			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
5	Digital temperature meter	M&V	Measuring range: -58.0° to 1832.0 °F / -50 to +1000 °C Accuracy: $\pm(0.9\text{ °F} + 0.3\% \text{ of mv})$ (-40.0° to 1652.0) / $\pm(0.5\text{ °C} + 0.3\% \text{ of mv})$ (-40 to +900 °C) $\pm(1.3\text{ °F} + 0.5\% \text{ of mv})$ (Remaining Range) / $\pm(0.7\text{ °C} + 0.5\% \text{ of mv})$ (Remaining Range) Resolution: 0.1 °F (-58° to 391.8 °F) / 0.1 °C (-50 to +199.9 °C) 1.0 °F (Remaining Range) / 1 °C (Remaining Range) Operating temperature: -4.0° to 122.0 °F / -20 to +50 °C Housing: ABS Number of channels: 2-channel	Center of Excellence in Construction			
6	Thermal camera	M&V	IR Resolution: 320 x 240 pixels (with testo Super Resolution technology 640 x 480 pixels) Thermal Sensitivity/NETD: <0.04 °C Accuracy: $\pm 2\text{ °C}$, $\pm 2\% \text{ of m.v.}$; (greater value applies) Digital Camera: 5 MP Display type: 8.9 cm (3.5")	Center of Excellence in Construction			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			TFT, QVGA (320 x 240 pixels) Storage device: Internal Memory min. 2.8 GB Case included: yes				
7	The portable Flowmeter for Gases in hazardous areas	M&V	<ul style="list-style-type: none"> • Measurement uncertainty at the measuring point $\pm 1...3$ % of reading • Repeatability 0.15 % of reading • Flow velocity range 0.03 to 115 ft/s, depending on pipe diameter • Ex zone transmitter FM Class I /Div 2 • Power supply Li-ION, Operat. time >25h • Available transducers Shear wave/Lamb wave for Ex zones FM Class I /Div 2 • for pipe sizes range 0.28 inch to 63 inch • for temperature range - 40°F to +392°F 	The Continuous Training Center in the field of energy efficiency of public buildings			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
8	Thermal camera	M&V	<ul style="list-style-type: none"> • IR Resolution 320 × 240 pixels • Thermal Sensitivity/NETD <40 mK at 30°C • Accuracy ±2°C or ±2% of the reading • Digital Camera 5 MP, with built-in LED photo/video lamp • Display 4", 640 × 480 pixel touchscreen LCD • Storage Media Removable SD card • Accuracy ±2°C or ±2% of the reading • Object Temperature Range -20 to 120°C; 0 to 650°C 	The Continuous Training Center in the field of energy efficiency of public buildings			
9	Ultrasonic Leak Detector of Gas, Compressed Air, Bearing monitoring, Machinery Lubrication	M&V	<ul style="list-style-type: none"> • Function Multifunction detector • Display Graphic LCD with backlighting (128 x 64) • Keyboard 12 function keys • Built-in sensors: Ultrasonic sensor; Pyrometer (according to the version). • External sensors: Through specific connector (Lemo 7 pin connector) • Data Logger - 100 Measurement Nodes 	The Continuous Training Center in the field of energy efficiency of public buildings			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			(measurement points) - Total 4000 easurements (measurements data) • Communication: USB interface • Operating temperature - 15 °C to +60 °C • Noise isolating, NRR 25 dB (tested in an accredited NVLAP laboratory)				
10	Analysis box for exhaust gas analysis systems	M&V	Analysis unit equipped with an O2 sensor. Additional gas sensors can be selected from CO, NO, NO2, SO2, H2S, CxHy or CO2. Measuring range: -20 to +50 °C Accuracy: ±0.2 °C (-10 to +50 °C) Resolution : 0.1 °C (-20 to +50 °C) Ambient temperature samples Type K (NiCr-Ni) Measuring range: -200 to +1370 °C Accuracy: ±0.4 °C (-100 to +200 °C) ±1 °C (-200 to -100.1 °C)	The Continuous Training Center in the field of energy efficiency of public buildings			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			<p>±1 °C (200.1 to +1370 °C) Resolution: 0.1 °C (-200 to +1370 °C) Type S (Pt10Rh-Pt) Measuring range: 0 to +1760 °C Accuracy: ±1 °C (0 to +1760 °C) Resolution: 0.1 °C (0 to +1760 °C) Differential pressure - piezoresistive Measurement range: -40 to +40 hPa -200 to +200 hPa Accuracy: ±1.5% of measured value (-40 to -3 hPa) ±1.5 % of the measured value (+3 to +40 hPa) ±0.03 hPa (-2.99 to +2.99 hPa) ±1.5% of measured value (-200 to -50 hPa) ±1.5 % of the measured value (+50 to +200 hPa)</p>				

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			<p>±0.5 hPa (-49.9 to +49.9 hPa) Resolution: 0.01 hPa (-40 to +40 hPa) 0.1 hPa (-200 to +200 hPa) Absolute pressure Measuring range: 600 to +1150 hPa Accuracy: ±10 hPa Resolution: 1 hPa</p>				
11	Multilyzer NG	M&V	<ul style="list-style-type: none"> • Flue gas temperature/temperature difference 0°C/+1,000°C • External wall/air temperature -20°C/+200°C • Draft, nominal +/- 70 hPa • Draft, maximum +/- 130 hPa • O2 0/21% volume • CO2 determination, indication range 0/CO2 max. • COH2 0/4,000 ppm • CO high (solid fuel) 0/20,000 ppm • NO 0/2,000 ppm • NO2 0/200 ppm • SO2 0/2,000 ppm • Table (device) approx. 750 g 	The Continuous Training Center in the field of energy efficiency of public buildings			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			<ul style="list-style-type: none"> • LCD display • 7 mm draft/pressure connection • 8 mm gas connection • Data saving of a maximum of 100 measurements • USB, infrared, Bluetooth interfaces. 				
12	Laser telemeter	M&V	<ul style="list-style-type: none"> • Operating range: 150 m • Accuracy: +/- 1 mm • Laser class: II • Measurement time: 0.5-4 s 	The Continuous Training Center in the field of energy efficiency of public buildings			
13	Electrical clamps wattmeter	M&V	<ul style="list-style-type: none"> • Type of meter: power clamp meter • Max. diameter of measured cable: 42mm • Kind of display used: LCD 4 digits (9999) • Sampling: 1x/6s (kW, kVA, kVAR), 2,5x/s • DC current measuring range: 10nA...99.99µA/999.9µA • AC current measuring range (1) indirect measurement) 10mA...99.99A/999.9A • DC current measuring accuracy: $\pm(1\% + 20 \text{ digits})$ • Bandwidth for AC current 	The Continuous Training Center in the field of energy efficiency of public buildings			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			measurements: 40...400Hz • AC current measuring accuracy: $\pm(2\% + 20 \text{ digits})$ • DC voltage measuring range: 0.1...999.9mV/9999mV/99.9V/600V • DC voltage measuring accuracy: $\pm(1\% + 20 \text{ digits})$ • AC voltage measuring range: 0.1...999.9mV/9999mV/99.9V/600V • AC voltage measuring accuracy: $\pm(1\% + 20 \text{ digits})$ • True RMS AC+DC • Bandwidth for AC voltage measurements 40...400Hz • Resistance measuring range: 9.999k Ω /99.99k Ω /999.9k Ω /9.999M Ω /99.99M Ω • Capacitance measuring range: 1nF...10 μ F/100 μ F/1000 μ F/7000 μ F • Capacitance measuring accuracy: $\pm(1,5\% + 5 \text{ digits})$				

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
14	Energy analyzer	M&V	<ul style="list-style-type: none"> • AC+DC TRMS voltage up to 1,000 V • TRMS current AC+DC: 5 mA up to 10 kA depending on the sensors • Harmonics from 0 to the 50th order, phase • Transients: up to 210 • Inrush with waveforms for a period > 10 min • TrueInrush function • Recording a selection of parameters at the maximum sampling rate in a period from a few days to a few weeks • Peak detection • Vector representation • IP53/IK08 • IEC 61000-4-30 Class B 	The Continuous Training Center in the field of energy efficiency of public buildings			
15	Digital multimeter	M&V	Type: 6 in1 Ambient temperature during operation: from -10°C to +60°C Sound level: 35 - 100 dB Measuring range: 33%...99%RH	Technological College from Chisinau			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
16	Digital clamp meter for measuring voltage and resistance	M&V	AC voltage: 600 V AC: 1000 A Resistance: 20mOm Diode test: da	Technological College from Chisinau			
17	Ammeter	M&V	Current (A): 0 - 50 A	Technological College from Chisinau			
18	Voltmeter	M&V	Voltage (V): 0 - 20 V Working voltage: 0 - 20 V	Technological College from Chisinau			
19	Oscilloscope	M&V	Type of oscilloscope: digital Kind of oscilloscope: DSO Display: colour Number of channels: 2 Sampling: 1Gsps Max. input voltage: 300V Input coupling: AC, DC, GND In. imp.: 1MΩ/20pF Time base: 2n...1ks/div Interface: USB	Technological College from Chisinau			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
20	Laboratory power supply	M&V	Digital display: voltage, current Coarse and fine adjustment (voltage and current (current limit)) Stepless voltage adjustment Short-circuit protection Two ranges of current display: mA / A Output voltage: 0-30 V Output current: 0-5 A Current limitation: 0-5 A Accuracy: 0.1 V Voltage stability: <0.01% +/- 2 mV Temperature coefficient: <200PPM/°C The power supply features high stability, reliability and low noise	Technological College from Chisinau			
21	Electronic scale	M&V	Capacity: 130 kg Resolution: 10g Accuracy: +/-0.1%	Technological College from Chisinau			
22	Digital thermometer	M&V	Measured Variable: Temperature Temperature measuring range: -40 - +150 °C Accuracy: +/- 1 °C Temperature Resolution: +/- 0.1 °C	Technological College from Chisinau			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			Temperature Units: °C Scope of Supply: Batteries RoHS Conformity: Yes				
23	Digital multimeter	M&V	DC Voltage: 0.1 mV–1000 V AC TRMS Voltage: 0.1 mV–750 V DC Current: 0.1 µA–10 A AC TRMS Current: 0.1 µA–10 A Resistance: 0.1 1–40 M1 Frequency: 1 Hz–400 MHz Capacitance: 0.001 nF–40 mF Temperature: –40 °F to 1382 °F –40 °C to 800 °C	Technological College from Chisinau			
24	Luxmeter	M&V	Illuminance measurement (LUX): 0~199,900Lux Illuminance measurement (Fc): 0~18,500Fc Accuracy: 0~9999Lux/0~999Fc: ±(4%+8) ≥10000Lux/≥1000Fc: ±(5%+10) ≥100000Lux/≥9999Fc: ±(5%+10) Resolution: 1Lux (0~9999Lux) 10Lux (≥10,000Lux)	Polytechnic College Balti			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			100Lux ($\geq 100,000$ Lux) 1Fc ($0 \sim 9999$ Fc); FC=Lux/10.76 10Fc ($\geq 10,000$ Fc); FC=Lux/10.76 Sampling time: 0.5s				
25	Voltmeter and digital ammeter	M&V	Voltage (V): 220 - 240 V Current (A): 5 A	IP Agricultural Technical College from Soroca			
26	Digital voltmeter	M&V	Voltage (V): 220 V Accuracy: 1% Working voltage: 0 - 600 V Consumption: <3VA	IP Agricultural Technical College from Soroca			
27	Digital ammeter	M&V	Current (A): 5A	IP Agricultural Technical College from Soroca			
28	Digital cable detector	M&V	Steel detection depth: 100 mm Copper detection depth: 80 mm Detection depth of live conductors: 50 mm Detectable materials:	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
			ferrous, non-ferrous metals, electrical conductors				
29	Digital clamp	M&V	Voltage (V): 0-600 V Type - AC/DC	IP Agricultural Technical College from Soroca			
30	Digital multimeter	M&V	Voltage (V): 0.1m...200m/2V/20V/200V/ 1000V Weight: 375 g Current (A): 0.1μ...200μ/20μ/20m/200m /2A/20A Type: AC/DC Frequency: 40 - 200 Hz	IP Agricultural Technical College from Soroca			
31	Electric cable detector in the walls	M&V	Frequency: 0-60 Hz Ambient temperature during operation: from 0°C to +40°C	IP Agricultural Technical College from Soroca			
32	Compact mini anemometer	M&V	Ambient temperature during operation: from 0°C to +50°C Measuring range: 1.1-30 m/s	IP Agricultural Technical College from Soroca			

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
33	Luxmeter	M&V	Illuminance measurement (LUX): 0~199,900Lux Illuminance measurement (Fc): 0~18,500Fc Accuracy: 0~9999Lux/0~999Fc: $\pm(4\%+8)$ $\geq 10000\text{Lux}/\geq 1000\text{Fc}$: $\pm(5\%+10)$ $\geq 100000\text{Lux}/\geq 9999\text{Fc}$: $\pm(5\%+10)$ Resolution: 1Lux (0~9999Lux) 10Lux ($\geq 10,000\text{Lux}$) 100Lux ($\geq 100,000\text{Lux}$) 1Fc (0~9999Fc); $\text{Fc}=\text{Lux}/10.76$ 10Fc ($\geq 10,000\text{Fc}$); $\text{Fc}=\text{Lux}/10.76$ Sampling time: 0.5s	IP Agricultural Technical College from Soroca			

LOT 3. Laboratory stands for training

Item No	Name of equipment	Category of Equipment	Minimum Technical Requirements	Beneficiary institution	✓ YES	✓ NO	Technical Compliance Please provide details /description of offered feature)
1	Calorimeters	laboratory installation	<ul style="list-style-type: none"> • Measuring range max.40000 J • Touchscreen: yes • Working temperature: 22 - 30 °C • Temperature measurement resolution: 0.0001 K • Cooling medium temperature: 12 - 27 °C • Cooling medium permissible operating pressure 1.5 bar • Cooling medium tap water • Type of cooling flow • Chiller RC 2 basic • Flow rate: 60 - 70 l/h • Rec. flow rate at 18°C: 60 l/h 	The Continuous Training Center in the field of energy efficiency of public buildings			

			<ul style="list-style-type: none"> • Oxygen operating pressure max. : 40 bar • Interface scale: RS232 • Interface printer USB • Interface PC: RS232 				
2	Drying oven	laboratory installation	<ul style="list-style-type: none"> • Heat output: 2400 W • Working temperature: room temp. +5 – 250 °C • Adjustment and display resolution: 0.1 K • Temperature constancy in medium: 0.3 ±K • Temperature display: yes • Timer display: 7 segment LED • Time setting range: 1 – 144000 min • Number of trays max.: 6 	The Continuous Training Center in the field of energy efficiency of public buildings			

			<ul style="list-style-type: none"> • Load for one tray max.: 30 kg • Operating area inner chamber: 550 x 525 x 450 mm • Total volume inner chamber: 125 l • Permissible ambient temperature: 5 – 40 °C • Permissible relative humidity: 80% 				
--	--	--	--	--	--	--	--

3	Laboratory stand „Heat pump“	laboratory installation	<ul style="list-style-type: none"> • heating capacity: approx. 2,3 kW at 5/65°C • Heating and source circuit pumps • max. flow rate: 3m3/h • max. head: 4m Heating controller <ul style="list-style-type: none"> • inputs: up to 16 • outputs: up to 16 • interfaces: DL bus, CAN, LAN Refrigerant <ul style="list-style-type: none"> • R410A Measuring ranges <ul style="list-style-type: none"> • temperature: • 4x -50...180°C • 3x 0...120°C • 1x -20...60°C • flow rate: 2x 20...2500L/h (water) • pressure: • 1x -1...15bar • 1x -1...49bar • 2x 0...6bar • 2x 0...50bar • 1x 0...18bar • 2x 0...10bar 400V, 50Hz, 3 phases; 400V, 60Hz, 3 phases 230V, 60Hz, 3	The Continuous Training Center in the field of energy efficiency of public buildings			
---	---------------------------------	----------------------------	--	--	--	--	--

			phases; UL/CSA optional				
--	--	--	----------------------------	--	--	--	--

4	Laboratory stand „Underfloor heating / geothermal energy absorber"	laboratory installation	Pipes lengths: 10m, 20m, 30m material: polyethylene wall thickness: 2mm outer diameter: 16mm operating pressure: max. 3bar Tank volume: 200L Measuring ranges temperature: 3x - 50...180°C flow rate: 20...2500L/h 230V, 50Hz, 1 phase UL/CSA optional	The Continuous Training Center in the field of energy efficiency of public buildings			
5	Laboratory stand „Fan heater / air heat exchanger"	laboratory installation	Fan speed: 900/1400min-1 flow rate: 683/1155m3h-1 Heat exchanger nominal cooling capacity: 2kW max. operating pressure: 10bar Measuring ranges temperature: 3x -50°C...180°C flow rate:	The Continuous Training Center in the field of energy efficiency of public buildings			

			20...2500L/h 230V, 50Hz, 1 phase				
6	Laboratory stand „Steam generator, electrical"	laboratory installation	Steam boiler <ul style="list-style-type: none"> • volume: 24L • max. pressure: 7bar • heating power: 6kW • max. steam output: 8,1kg/h Feed water tank: 45L Superheater <ul style="list-style-type: none"> • power: 750W • max. temperature: 250°C Condensate pump <ul style="list-style-type: none"> • max. flow rate: 0,6L/min Submersible pump <ul style="list-style-type: none"> • max. flow rate: 10L/min Storage tank: 15L Measuring ranges	The Continuous Training Center in the field of energy efficiency of public buildings			

			<ul style="list-style-type: none"> • temperature: 6x 0...400°C • pressure: 0...1,6bar abs. (condenser), 0...16 bar abs. (live steam) • flow rate: 0...720L/h (cooling water) Steam supply unit 230V, 60Hz, 3 phases, 400V, 60Hz, 3 phases 400V, 50Hz, 3 phases Steam processing 230V, 60Hz, 1 phase, 230V, 50Hz, 1 phase 120V, 60Hz, 1 phase, UL/CSA optional				
7	Laboratory stand „Comparison of various heat exchangers"	laboratory installation	Plate heat exchanger, (water-water) <ul style="list-style-type: none"> • number of plates: 10 • heat transfer area: approx. 0,26m² Tubular heat exchanger (water-water) <ul style="list-style-type: none"> • heat transfer area: 0,1m² Shell & tube heat exchanger (water-	The Continuous Training Center in the field of energy efficiency of public buildings			

			<p>water)</p> <ul style="list-style-type: none"> • output: 13kW <p>Finned tube heat exchanger (water-air)</p> <ul style="list-style-type: none"> • heat transfer area: approx. 2,8m² • fan max. flow rate: 780m³/h • fan max. pressure difference: 430Pa <p>Stirred tank with double jacket and coiled tube (water-water)</p> <ul style="list-style-type: none"> • double jacket heat transfer area: 0,16m² • coiled tube heat transfer area: 0,17m² <p>Measuring ranges</p> <ul style="list-style-type: none"> • differential pressure: • 1x 0...10mbar (air) • 1x 0...1000mbar (water) • flow rate: 2x 0...3m³/h • temperature: 10x 0...100°C <p>230V, 50Hz, 1 phase UL/CSA optional</p>				
--	--	--	--	--	--	--	--

8	Laboratory stand „Gas turbine with power turbine"	laboratory installation	<p>Gas generator (compressor and high-pressure turbine)</p> <ul style="list-style-type: none"> • speed range: 60000...125000min-1 • max. pressure ratio: 1:2,0 • max. mass flow rate (air): 0,115kg/sec • max. fuel consumption: 120g/min <p>Power turbine</p> <ul style="list-style-type: none"> • speed range: 10000...40000min-1 • mechanical power: 0...1,5kW • electrical power: 0...1kW • sound level at 1m distance: max. 80dB(A) • temperature exhaust gas: 700°C <p>Measuring ranges</p> <ul style="list-style-type: none"> • temperature: 4x 0...200°C / 3x 0...1200°C • speed: 0...199999min-1 • electric power: 0...1999W • velocity: 0...28m/s 	The Continuous Training Center in the field of energy efficiency of public buildings			
---	---	----------------------------	--	--	--	--	--

			(air inlet) • flow rate: 1,5...10,5kg/h (fuel) • supply pressure: 0...25bar (fuel) • nozzle pressure: 0...4bar (fuel) • combustion chamber pressure loss: 0...20mbar • pressure (inlet):power turbine 0...2,5bar (power turbine) • pressure (inlet): 0...250mbar (power turbine) 230V, 50Hz, 1 phase UL/CSA optional				
--	--	--	--	--	--	--	--

9	Laboratory stand „Axial steam turbine“	laboratory installation	<p>Single-stage axial impulse turbine</p> <ul style="list-style-type: none"> • rotor inner diameter: 54mm • max. speed: 40000min-1 • max. inlet pressure: 9bar abs. • max. outlet pressure: 1bar abs. • nominal power output: 50W <p>Measuring ranges</p> <ul style="list-style-type: none"> • pressure: • 0...16bar (steam) • 0...1,6bar (condenser) • differential pressure: 0...50mbar • flow rate: 0...720L/h (cooling water) • speed: 0...50000min-1 • torque: 0...70Nmm • temperature: 0...400°C <p>230V, 50Hz, 1 phase UL/CSA optional</p>	The Continuous Training Center in the field of energy efficiency of public buildings			
---	---	----------------------------	--	--	--	--	--

10	Laboratory stand „Parabolic trough collector with solar tracking“	laboratory installation	PLC: Eaton XV-303 Collector <ul style="list-style-type: none"> • parabolic mirror • trough length: 1,4m • aperture width: 1,1m • mirror surface: 1,5m² • focal length: 0,3m • absorber • selectively coated absorber tubes with U-tube line for heat transfer fluid • double-walled glass shell to reduce heat loss • solar circuit station • solar pump: adjustable Hot water circuit <ul style="list-style-type: none"> • plate heat exchanger: 3kW, 10 plates • buffer tank: 70L Measuring ranges <ul style="list-style-type: none"> • flow rate: 20...320L/h • temperature: 4x 0...160°C • pressure: 0...6bar 230V, 50Hz, 1 phase, UL/CSA optional	The Continuous Training Center in the field of energy efficiency of public buildings			
----	--	----------------------------	---	--	--	--	--

11	Laboratory stand "Electrical networks and installations"	laboratory installation	Power supply: 1~220 V, 50 Hz Power consumption, kW, max - 0,3 Overall dimensions, max: width, mm 1310 height, mm 1470 depth, mm 610 Weight, kg, max 70	IP Agricultural Technical College from Soroca			
12	Laboratory stand "Installation and adjustment of electrical installations"	laboratory installation	Power supply 3~380/220V, 50Hz Power consumption, Watt, max 500 Stand overall dimensions, max: Width, mm 1310 Height, mm 1470 Depth, mm 600 Weight, kg, max 60 Desktop version overall dimensions, max: Width, mm 1310 Height, mm 680 Depth, mm 600 Weight, kg, max 45	IP Agricultural Technical College from Soroca			
13	Laboratory stand "DC motor excited in series with MPSU"	laboratory installation	Power supply ~50Hz 220V / 3~50Hz 220V 3P+PE+N (at power supply from step- down transformer 380/220 V) Power consumption,	IP Agricultural Technical College from Soroca			

			<div>kW, max 0,3/1</div> <div>Overall dimensions,</div> <div>max:</div> <div>width, mm 1025</div> <div>height, mm 1455</div> <div>depth, mm 600</div> <div>Weight, kg, max 120</div>				
--	--	--	--	--	--	--	--

SECTION 3: Management Structure and Key Personnel

- 3.1 Describe the overall management approach toward planning and implementing the project. Include an organization chart for the management of the project describing the relationship of key positions and designations. Provide a spreadsheet to show the activities of each personnel and the time allocated for his/her involvement.
- 3.2 Provide CVs for key personnel that will be provided to support the implementation of this project using the format below. CVs should demonstrate qualifications in areas relevant to the scope of goods and/or services.

Format for CV of Proposed Key Personnel

Name of Personnel	[Insert]
Position for this assignment	[Insert]
Nationality	[Insert]
Language proficiency	[Insert]
Education/ Qualifications	<i>[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]</i> [Insert]
Professional certifications	<i>[Provide details of professional certifications relevant to the scope of goods and/or services]</i> <ul style="list-style-type: none">▪ Name of institution: [Insert]▪ Date of certification: [Insert]
Employment Record/ Experience	<i>[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position held and location of employment. For experience in last five years, detail the type of activities performed, degree of responsibilities, location of assignments and any other information or professional experience considered pertinent for this assignment.]</i> [Insert]
References	<i>[Provide names, addresses, phone and email contact information for two (2) references]</i> Reference 1: [Insert] Reference 2: [Insert]

I, the undersigned, certify that to the best of my knowledge and belief, the data provided above correctly describes my qualifications, my experiences, and other relevant information about myself.

Signature of Personnel

Date (Day/Month/Year)

FORM H: PRICE SCHEDULE

Name of bidder:	Click or tap here to enter text.	Date:	Click or tap to enter a date.
ITB reference:	Click or tap here to enter text.		

Bidders shall fill in these Price Schedule Forms in accordance with the instructions indicated. The Price Schedule must include a detailed cost breakdown of all goods and related services to be provided. Separate figures must be provided for each functional grouping or category, if any.

Any estimates for cost-reimbursable items, such as travel of experts and out-of-pocket expenses, should be listed separately.

Currency of the Bid: US Dollars

Price Schedule Lot 1

Item #	Description	UOM	Quantity	Unit Price, USD	Total Price, USD
1.	Drill drivers with battery	piece	1		
2.	Transformer electronic	piece	6		
3.	Transformer for LED strip	piece	1		
4.	RGB LED amplifier	piece	6		
5.	RGB controller with remote	piece	6		
6.	Freon charging station	piece	1		
7.	Manifold (2-way manifold with Bourdon Type)	piece	2		
8.	Pipe rolling device	piece	2		
9.	Refrigeration socket set inch sizes	piece	2		
10.	Refrigeration socket set	piece	2		
11.	Torque wrench set in a handy case	piece	1		
12.	Screwdriver set	piece	2		
13.	LED projector with solar battery	piece	30		
14.	LED street lighting body with solar panel	piece	20		
15.	Sensor day/night	piece	20		
16.	Motion sensor	piece	30		
17.	Digital timer socket	piece	20		
18.	LED projector	piece	30		
19.	Analog programmable switch	piece	30		
20.	Electronic socket timer	piece	20		
21.	Mechanical time relay (programmable 24h analogue socket)	piece	20		
22.	Wi-fi smart socket	piece	20		
23.	Smart switch	piece	30		

Item #	Description	UOM	Quantity	Unit Price, USD	Total Price, USD
24.	Unitary socket outdoor	piece	50		
25.	External unitary switch	piece	20		
26.	External double switch	piece	20		
27.	UZO automatic switch	piece	10		
28.	Automatic switch	piece	50		
29.	Low voltage arrester	piece	10		
30.	Photorele	piece	20		
31.	Contactor	piece	10		
32.	Electric motor	piece	3		
33.	Contactor	piece	20		
34.	Distribution box	piece	40		
35.	Outdoor automotive box	piece	10		
36.	Electrician tools set	piece	10		
37.	Assembly table	piece	10		
38.	LED street lighting body with solar panel	piece	4		
39.	LED street lighting body with solar panel	piece	4		
40.	Support for street lighting body	piece	8		
41.	Single-phase electric meter	piece	4		
42.	Three-phase electric meter	piece	2		
43.	Electric cable	piece	100 m		
44.	Electric cable	piece	100 m		
45.	Electric cable	piece	100 m		
46.	Voltage stabilizer	piece	1		
47.	Voltage stabilizer	piece	1		
48.	Single-phase inverter	piece	1		
49.	Inverter 220 V	piece	1		
50.	Three-phase electric motor	piece	2		
51.	Three-phase electric motor	piece	1		
52.	Three-phase electric motor	piece	1		
53.	Electrician tools set	piece	2		
54.	Tool set	piece	1		
55.	Photovoltaic plant for laboratory	piece	1		
56.	Assembly table	piece	5		
57.	LED projector with the solar battery	piece	2		
58.	Sensor day/night	piece	8		

Item #	Description	UOM	Quantity	Unit Price, USD	Total Price, USD
59.	Motion sensor	piece	5		
60.	Digital timer socket	piece	10		
61.	Analog programmable switch	piece	5		
62.	Electronic socket timer	piece	5		
63.	Mechanical time relay (programmable 24h analogue socket)	piece	5		
64.	Wi-fi smart socket	piece	5		
65.	Unitary socket outdoor	piece	5		
66.	External unitary switch	piece	20		
67.	External double switch	piece	20		
68.	UZO automatic switch	piece	5		
69.	Automatic switch	piece	10		
70.	Photorele	piece	5		
71.	Distribution box	piece	10		
72.	Generator gasoline 3 kW 220 V	piece	1		
Incoterms charges, including transportation/delivery costs					
Installation, testing and commissioning					
Training					
After sales services and technical support					
GRAND TOTAL LOT 1					

Price Schedule LOT 2

Item #	Description	UOM	Quantity	Unit Price, USD	Total Price, USD
1.	Combustion Analyzer for Commercial and Industrial Applications	piece	1		
2.	Infrared thermometer with laser marking	piece	1		
3.	Pressure and flow velocity measuring instrument	piece	1		
4.	Light meter	piece	1		
5.	Digital temperature meter	piece	1		
6.	Thermal camera	piece	1		
7.	The portable Flowmeter for Gases in hazardous areas	piece	1		
8.	Thermal camera	piece	1		

9.	Ultrasonic Leak Detector of Gas, Compressed Air, Bearing monitoring, Machinery Lubrication	piece	1		
10.	Analysis box for exhaust gas analysis systems	piece	1		
11.	Multilyzer NG	piece	1		
12.	Laser telemeter	piece	1		
13.	Electrical clamps wattmeter	piece	1		
14.	Energy analyzer	piece	1		
15.	Digital multimeter	piece	4		
16.	Digital clamp meter for measuring voltage and resistance	piece	4		
17.	Ammeter	piece	6		
18.	Voltmeter	piece	6		
19.	Oscilloscope	piece	1		
20.	Laboratory power supply	piece	4		
21.	Electronic scale	piece	1		
22.	Digital thermometer	piece	2		
23.	Digital multimeter	piece	2		
24.	Luxmeter	piece	10		
25.	Voltmeter and digital ammeter	piece	4		
26.	Digital voltmeter	piece	3		
27.	Digital ammeter	piece	3		
28.	Digital cable detector	piece	2		
29.	Digital clamp	piece	3		
30.	Digital multimeter	piece	1		
31.	Electric cable detector in the walls	piece	1		
32.	Compact mini anemometer	piece	1		
33.	Luxmeter	piece	3		
Incoterms charges, including transportation/delivery costs					
Installation, testing and commissioning					
Training					
After sales services and technical support					
GRAND TOTAL LOT 2					

Price Schedule LOT 3

Item #	Description	UOM	Quantity	Unit Price, USD	Total Price, USD
1.	Calorimeters	piece	1		

Item #	Description	UOM	Quantity	Unit Price, USD	Total Price, USD
2.	Drying oven	piece	1		
3.	Laboratory stand "Heat pump"	piece	1		
4.	Laboratory stand "Underfloor heating / geothermal energy absorber"	piece	1		
5.	Laboratory stand "Fan heater / air heat exchanger"	piece	1		
6.	Laboratory stand "Steam generator, electrical"	piece	1		
7.	Laboratory stand "Comparison of various heat exchangers"	piece	1		
8.	Laboratory stand "Gas turbine with power turbine"	piece	1		
9.	Laboratory stand "Axial steam turbine"	piece	1		
10.	Laboratory stand "Parabolic trough collector with solar tracking"	piece	1		
11.	Laboratory stand "Electrical networks and installations"	piece	1		
12.	Laboratory stand "Installation and adjustment of electrical installations"	piece	2		
13.	Laboratory stand "DC motor excited in series with MPSU"	piece	1		
Incoterms charges, including transportation/delivery costs					
Installation, testing and commissioning					
Training					
After sales services and technical support					
GRAND TOTAL LOT 3					

**In case the related services and other costs are included in the value of delivered goods and cannot be reflected as a separate line of expenses, please specify 0 (zero) value in the relevant line in the table above.*

I, the undersigned, certify that I am duly authorized by [Click or tap here to enter text.](#) to sign this bid and bind [Click or tap here to enter text.](#) should [Click or tap here to enter text.](#) accept this bid:

Name : _____

Title : _____

Date : _____

Signature : _____

FORM I: BID SECURITY

**Bid Security must be issued using the official letterhead of the Issuing Bank.
Except for indicated fields, no changes may be made on this template.**

Beneficiary: Insert contact information for procuring organisation as provided in Section 3: Data Sheet.

ITB Reference: Click or tap here to enter text.

WHEREAS Click or tap here to enter text. (hereinafter called “the bidder”) has submitted a bid to Click or tap here to enter text. dated Click or tap to enter a date. to execute goods and/or services Click or tap here to enter text. (hereinafter called “the bid”):

AND WHEREAS it has been stipulated by you that the bidder shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security if the bidder:

- a) Fails to sign the Contract after Click or tap here to enter text. has awarded it;
- b) Withdraws its bid after the date of the opening of the bids;
- c) Fails to comply with Click or tap here to enter text.’s variation of requirement, as per ITB instructions; or
- d) Fails to furnish Performance Security, insurances, or other documents that Click or tap here to enter text. may require as a condition to rendering the contract effective.

AND WHEREAS we have agreed to give the bidder such Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the bidder, up to a total of [amount of guarantee] [in words and numbers], such sum being payable in the types and proportions of currencies in which the bid price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of [amount of guarantee as aforesaid] without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

This guarantee shall be valid up to 30 days after the final date of validity of bids.

SIGNATURE AND SEAL OF THE GUARANTOR BANK

Signature: _____

Name: _____

Title: _____

Date: _____

Name of Bank _____

Address _____

[Stamp with official stamp of the Bank]