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INVITATION TO BID

Materials for EE and RE Measures under SES Project

ITB No.: UNDP DPRK ITB 2018001

Project: UNDP SES Project

Country: Democratic People's Republic of Korea

Issued on: 11 September 2018

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Section 1. Letter of Invitation

The United Nations Development Programme (UNDP) hereby invites you to submit a Bid to this Invitation to Bid (ITB) for the above-referenced subject.

This ITB includes the following documents and the General Terms and Conditions of Contract which is inserted in the Bid Data Sheet:

- Section 1: This Letter of Invitation
- Section 2: Instruction to Bidders
- Section 3: Bid Data Sheet (BDS)
- Section 4: Evaluation Criteria
- Section 5: Schedule of Requirements and Technical Specifications
- Section 6: Returnable Bidding Forms
 - Form A: Bid Submission Form
 - Form B: Bidder Information Form
 - Form C: Joint Venture/Consortium/Association Information Form
 - Form D: Qualification Form
 - Form E: Format of Technical Bid
 - Form F: Price Schedule

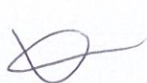
If you are interested in submitting a Bid in response to this ITB, please prepare your Bid in accordance with the requirements and procedure as set out in this ITB and submit it by the Deadline for Submission of Bids set out in Bid Data Sheet.

Please acknowledge receipt of this ITB by sending an email to **bids.china@undp.org**, indicating whether you intend to submit a Bid or otherwise. You may also utilize the "Accept Invitation" function in eTendering system, where applicable. This will enable you to receive amendments or updates to the ITB. Should you require further clarifications, kindly communicate with the contact person/s identified in the attached Data Sheet as the focal point for queries on this ITB.

UNDP looks forward to receiving your Bid and thank you in advance for your interest in UNDP procurement opportunities.

Disclaimer: Procurement of items listed in this ITB are subject to, and contingent on, applicable exemption(s) being obtained from the Security Council Committee established pursuant to resolution 1718 (2006).

Issued by



Name: Xiao Yi

Title: Procurement Assistant

Date: **September 11, 2018**

Approved by:



Name: Ge Yunyan

Title: Operations Manager

Date: **September 11, 2018**

Section 2. Instruction to Bidders

GENERAL PROVISIONS	
1. Introduction	<p>1.1 Bidders shall adhere to all the requirements of this ITB, including any amendments made in writing by UNDP. This ITB is conducted in accordance with the UNDP Programme and Operations Policies and Procedures (POPP) on Contracts and Procurement which can be accessed at https://popp.undp.org/SitePages/POPPBSUnit.aspx?TermID=254a9f96-b883-476a-8ef8-e81f93a2b38d</p> <p>1.2 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> <p>1.3 UNDP reserves the right to cancel the procurement process at any stage without any liability of any kind for UNDP, upon notice to the bidders or publication of cancellation notice on UNDP website.</p> <p>1.4 As part of the bid, it is desired that the Bidder registers at the United Nations Global Marketplace (UNGM) website (www.ungm.org). The Bidder may still submit a bid even if not registered with the UNGM. However, if the Bidder is selected for contract award, the Bidder must register on the UNGM prior to contract signature.</p>
2. Fraud & Corruption, Gifts and Hospitality	<p>2.1 UNDP strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of UNDP vendors and requires all bidders/vendors observe the highest standard of ethics during the procurement process and contract implementation. UNDP's Anti-Fraud Policy can be found at http://www.undp.org/content/undp/en/home/operations/accountability/audit/office_of_audit_andinvestigation.html#anti</p> <p>2.2 Bidders/vendors shall not offer gifts or hospitality of any kind to UNDP staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches or dinners.</p> <p>2.3 In pursuance of this policy, UNDP:</p> <p>(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;</p> <p>(b) 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.</p> <p>2.4 All Bidders must adhere to the UN Supplier Code of Conduct, which may be found at http://www.un.org/depts/ptd/pdf/conduct_english.pdf</p>
3. Eligibility	<p>3.1 A vendor should not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. Vendors are therefore required to disclose to UNDP whether they are subject to any sanction or temporary suspension imposed by these organizations.</p> <p>3.2 It is the Bidder's responsibility to ensure that its employees, joint venture members, sub-contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by UNDP.</p>

4. Conflict of Interests	<p>4.1 Bidders must strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. Bidders found to have a conflict of interest shall be disqualified. Without limitation on the generality of the above, Bidders, and any of their affiliates, shall be considered to have a conflict of interest with one or more parties in this solicitation process, if they:</p> <ul style="list-style-type: none"> a) Are or have been associated in the past, with a firm or any of its affiliates which have been engaged by UNDP to provide services for the preparation of the design, specifications, Terms of Reference, cost analysis/estimation, and other documents to be used for the procurement of the goods and services in this selection process; b) Were involved in the preparation and/or design of the programme/project related to the goods and/or services requested under this ITB; or c) Are found to be in conflict for any other reason, as may be established by, or at the discretion of UNDP. <p>4.2 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>4.3 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>4.4 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>
B. PREPARATION OF BIDS	
5. General Considerations	<p>5.1 In preparing the Bid, the Bidder is expected to examine the ITB in detail. Material deficiencies in providing the information requested in the ITB may result in rejection of the Bid.</p> <p>5.2 The Bidder will not be permitted to take advantage of any errors or omissions in the ITB. Should such errors or omissions be discovered, the Bidder must notify the UNDP accordingly.</p>
6. Cost of Preparation of Bid	<p>6.1 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>
7. Language	<p>7.1 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 the BDS.</p>
8. Documents	<p>8.1 The Bid shall comprise of the following documents and related forms which</p>

Comprising the Bid	<p>details are provided in the BDS:</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 by BDS; e) Any attachments and/or appendices to the Bid.
9. Documents Establishing the Eligibility and Qualifications of the Bidder	<p>9.1 The Bidder shall furnish documentary evidence of its status as an eligible and qualified vendor, using the Forms provided under Section 6 and providing documents required in those forms. In order to award a contract to a Bidder, its qualifications must be documented to UNDP's satisfaction.</p>
10. Technical Bid Format and Content	<p>10.1 The Bidder is required to submit a Technical Bid using the Standard Forms and templates provided in Section 6 of the ITB.</p> <p>10.2 Samples of items, when required as per Section 5, shall be provided within the time specified and unless otherwise specified by the Purchaser, at no expense to the UNDP. If not destroyed by testing, samples will be returned at Bidder's request and expense, unless otherwise specified.</p> <p>10.3 When applicable and required as per Section 5, the Bidder shall describe the necessary training programme available for the maintenance and operation of the equipment offered as well as the cost to the UNDP. Unless otherwise specified, such training as well as training materials shall be provided in the language of the Bid as specified in the BDS.</p> <p>10.4 When applicable and required as per Section 5, the Bidder shall certify the availability of spare parts for a period of at least five (5) years from date of delivery, or as otherwise specified in this ITB.</p>
11. Price Schedule	<p>11.1 The Price Schedule shall be prepared using the Form provided in Section 6 of the ITB and taking into consideration the requirements in the ITB.</p> <p>11.2 Any requirement described in the Technical Bid but not priced in the Price Schedule, shall be assumed to be included in the prices of other activities or items, as well as in the final total price.</p>
12. Bid Security	<p>12.1 A Bid Security, if required by BDS, shall be provided in the amount and form indicated in the BDS. The Bid Security shall be valid for a minimum of thirty (30) days after the final date of validity of the Bid.</p> <p>12.2 The Bid Security shall be included along with the Bid. If Bid Security is required by the ITB but is not found in the Bid, the offer shall be rejected.</p> <p>12.3 If the Bid Security amount or its validity period is found to be less than what is required by UNDP, UNDP shall reject the Bid.</p> <p>12.4 In the event an electronic submission is allowed in the BDS, 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 BDS.</p> <p>12.5 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"> a) If the Bidder withdraws its offer during the period of the Bid Validity specified in the BDS, or; b) In the event the successful Bidder fails: <ul style="list-style-type: none"> i. to sign the Contract after UNDP has issued an award; or ii. 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.
13. Currencies	<p>13.1 All prices shall be quoted in the currency or currencies indicated in the BDS. Where Bids are quoted in different currencies, for the purposes of comparison of all Bids:</p> <ul style="list-style-type: none"> a) 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 the last day of submission of Bids; and b) In the event that UNDP selects a Bid for award that is quoted in a currency different from the preferred currency in the BDS, UNDP shall reserve the right to award the contract in the currency of UNDP's preference, using the conversion method specified above.
14. Joint Venture, Consortium or Association	<p>14.1 If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that : (i) 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, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Bid; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.</p> <p>14.2 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>14.3 The lead entity and the member entities of the JV, Consortium or Association shall abide by the provisions of Clause 9 herein in respect of submitting only one Bid.</p> <p>14.4 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>14.5 A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:</p> <ul style="list-style-type: none"> a) Those that were undertaken together by the JV, Consortium or Association; and b) Those that were undertaken by the individual entities of the JV, Consortium or Association. <p>14.6 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>14.7 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>
15. Only One Bid	<p>15.1 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>15.2 Bids submitted by two (2) or more Bidders shall all be rejected if they are found</p>

	<p>to have any of the following:</p> <ul style="list-style-type: none"> a) they have at least one controlling partner, director or shareholder in common; or b) any one of them receive or have received any direct or indirect subsidy from the other/s; or c) they have the same legal representative for purposes of this ITB; or d) 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; e) 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.
16. Bid Validity Period	<p>16.1 Bids shall remain valid for the period specified in the BDS, 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>16.2 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>
17. Extension of Bid Validity Period	<p>17.1 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>17.2 If the Bidder agrees to extend the validity of its Bid, it shall be done without any change to the original Bid.</p> <p>17.3 The Bidder has the right to refuse to extend the validity of its Bid, in which case, the Bid shall not be further evaluated.</p>
18. Clarification of Bid (from the Bidders)	<p>18.1 Bidders may request clarifications on any of the ITB documents no later than the date indicated in the BDS. Any request for clarification must be sent in writing in the manner indicated in the BDS. If inquiries are sent other than specified channel, even if they are sent to a UNDP staff member, UNDP shall have no obligation to respond or confirm that the query was officially received.</p> <p>18.2 UNDP will provide the responses to clarifications through the method specified in the BDS.</p> <p>18.3 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>
19. Amendment of Bids	<p>19.1 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>19.2 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>
20. Alternative Bids	<p>20.1 Unless otherwise specified in the BDS, alternative Bids shall not be considered. If submission of alternative Bid is allowed by BDS, a Bidder may submit an alternative Bid, but only if it also submits a Bid conforming to the ITB</p>

	<p>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>20.2 If multiple/alternative bids are being submitted, they must be clearly marked as "Main Bid" and "Alternative Bid"</p>
21. Pre-Bid Conference	<p>21.1 When appropriate, a pre-bid conference will be conducted at the date, time and location specified in the BDS. All Bidders are encouraged to attend. Non-attendance, however, shall not result in disqualification of an interested Bidder. Minutes of the Bidder's conference will be disseminated on the procurement website and shared by email or on the e-Tendering platform as specified in the BDS. 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>
C. SUBMISSION AND OPENING OF BIDS	
22. Submission	<p>22.1 The Bidder shall submit a duly signed and complete Bid comprising the documents and forms in accordance with requirements in the BDS. The Price Schedule shall be submitted together with the Technical Bid. Bid can be delivered either personally, by courier, or by electronic method of transmission as specified in the BDS.</p> <p>22.2 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 a Power of Attorney, accompanying the Bid.</p> <p>22.3 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 Contract Terms and Conditions.</p>
Hard copy (manual) submission	<p>22.4 Hard copy (manual) submission by courier or hand delivery allowed or specified in the BDS shall be governed as follows:</p> <p>a) The signed Bid shall be marked "Original", and its copies marked "Copy" as appropriate. The number of copies is indicated in the BDS. All copies shall be made from the signed original only. If there are discrepancies between the original and the copies, the original shall prevail.</p> <p>(b) The Technical Bid and Price Schedule must be sealed and submitted together in an envelope, which shall:</p> <ol style="list-style-type: none"> Bear the name of the Bidder; Be addressed to UNDP as specified in the BDS; and Bear a warning not to open before the time and date for Bid opening as specified in the BDS. <p>If the envelope with the Bid is not sealed and marked as required, UNDP shall assume no responsibility for the misplacement, loss, or premature opening of the Bid.</p>
Email and eTendering submissions	<p>22.5 Electronic submission through email or eTendering, if allowed as specified in the BDS, shall be governed as follows:</p> <ol 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. <p>22.6 Detailed instructions on how to submit, modify or cancel a bid in the</p>

	<p>eTendering system are provided in the eTendering system Bidder User Guide and Instructional videos available on this link: http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement-notice/resources/</p>
23. Deadline for Submission of Bids and Late Bids	<p>23.1 Complete Bids must be received by UNDP in the manner, and no later than the date and time, specified in the BDS. UNDP shall only recognise the actual date and time that the bid was received by UNDP</p> <p>23.2 UNDP shall not consider any Bid that is received after the deadline for the submission of Bids.</p>
24. Withdrawal, Substitution, and Modification of Bids	<p>24.1 A Bidder may withdraw, substitute or modify its Bid after it has been submitted at any time prior to the deadline for submission.</p> <p>24.2 Manual and Email submissions: A bidder may withdraw, substitute or modify its Bid 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>24.3 eTendering: A Bidder may withdraw, substitute or modify its Bid by Cancelling, Editing, and re-submitting the Bid directly in the system. It is the responsibility of the Bidder to properly follow the system instructions, duly edit and submit a substitution or modification of the Bid as needed. Detailed instructions on how to cancel or modify a Bid directly in the system are provided in the Bidder User Guide and Instructional videos.</p> <p>24.4 Bids requested to be withdrawn shall be returned unopened to the Bidders (only for manual submissions), except if the bid is withdrawn after the bid has been opened.</p>
25. Bid Opening	<p>25.1 UNDP will open the Bid in the presence of an ad-hoc committee formed by UNDP of at least two (2) members.</p> <p>25.2 The Bidders' names, modifications, withdrawals, the condition of the envelope labels/seals, the number of folders/files and all other such other details as UNDP may consider appropriate, will be announced at the opening. No Bid shall be rejected at the opening stage, except for late submissions, in which case, the Bid shall be returned unopened to the Bidders.</p> <p>25.3 In the case of e-Tendering submission, bidders will receive an automatic notification once the Bid is opened.</p>
D. EVALUATION OF BIDS	
26. Confidentiality	<p>26.1 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>26.2 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>
27. Evaluation of Bids	<p>27.1 UNDP will conduct the evaluation solely on the basis of the Bids received.</p> <p>27.2 Evaluation of Bids shall be undertaken in the following steps:</p>

	<ul style="list-style-type: none"> a) Preliminary Examination including Eligibility b) Arithmetical check and ranking of bidders who passed preliminary examination by price. c) Qualification assessment (if pre-qualification was not done) a) Evaluation of Technical Bids b) Evaluation of prices <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>
28. Preliminary Examination	<p>28.1 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.</p>
29. Evaluation of Eligibility and Qualification	<p>29.1 Eligibility and Qualification of the Bidder will be evaluated against the Minimum Eligibility/Qualification requirements specified in the Section 4 (Evaluation Criteria).</p> <p>29.2 In general terms, vendors that meet the following criteria may be considered qualified:</p> <ul style="list-style-type: none"> a) 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; b) They have a good financial standing and have access to adequate financial resources to perform the contract and all existing commercial commitments, 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; d) They are able to comply fully with the UNDP General Terms and Conditions of Contract; e) They do not have a consistent history of court/arbitral award decisions against the Bidder; and f) They have a record of timely and satisfactory performance with their clients.
30. Evaluation of Technical Bid and prices	<p>30.1 The evaluation team shall review and evaluate the Technical Bids on the basis of their responsiveness to the Schedule of Requirements and Technical Specifications and other documentation provided, applying the procedure indicated in the BDS and other ITB documents. 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>
31. Due diligence	<p>31.1 UNDP reserves the right to undertake a due diligence exercise, 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

	<p>previous works, as deemed necessary;</p> <p>e) Physical inspection of the Bidder's offices, branches or other places where business transpires, with or without notice to the Bidder;</p> <p>f) Other means that UNDP may deem appropriate, at any stage within the selection process, prior to awarding the contract.</p>
32. Clarification of Bids	<p>32.1 To assist in the examination, evaluation and comparison of Bids, UNDP may, at its discretion, request any Bidder for a clarification of its Bid.</p> <p>32.2 UNDP's request for clarification and the response shall be in writing and no change in the prices or substance of the Bid shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by UNDP in the evaluation of the Bids, in accordance with the ITB.</p> <p>32.3 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>
33. Responsiveness of Bid	<p>33.1 UNDP's determination of a Bid's responsiveness will be based on the contents of the bid itself. A substantially responsive Bid is one that conforms to all the terms, conditions, specifications and other requirements of the ITB without material deviation, reservation, or omission.</p> <p>33.2 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>
34. Nonconformities, Repairable Errors and Omissions	<p>34.1 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.</p> <p>34.2 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>34.3 For the bids that have passed the preliminary examination, UNDP shall check and correct arithmetical errors as follows:</p> <p>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;</p> <p>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</p> <p>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> <p>34.4 If the Bidder does not accept the correction of errors made by UNDP, its Bid shall be rejected.</p>
E. AWARD OF CONTRACT	
35. Right to Accept,	<p>35.1 UNDP reserves the right to accept or reject any bid, to render any or all of the</p>

Reject, Any or All Bids	<p>bids as non-responsive, and to reject all Bids at any time prior to award of contract, without incurring any liability, or obligation to inform the affected Bidder(s) of the grounds for UNDP's action. UNDP shall not be obliged to award the contract to the lowest priced offer.</p>
36. Award Criteria	<p>36.1 Prior to expiration of the period of Bid validity, UNDP shall award the contract to the qualified and eligible Bidder that is found to be responsive to the requirements of the Schedule of Requirements and Technical Specification, and has offered the lowest price.</p>
37. Debriefing	<p>37.1 In the event that a Bidder is unsuccessful, the Bidder may request for a debriefing from UNDP. The purpose of the debriefing is to discuss the strengths and weaknesses of the Bidder's submission, in 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.</p>
38. Right to Vary Requirements at the Time of Award	<p>38.1 At the time of award of Contract, UNDP reserves the right to vary the quantity of goods 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>
39. Contract Signature	<p>39.1 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.</p>
40. Contract Type and General Terms and Conditions	<p>40.1 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</p>
41. Performance Security	<p>41.1 A performance security, if required in the BDS, shall be provided in the amount specified in BDS and form available at https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Solicitation_Performance%20Guarantee%20Form.docx&action=default within a maximum of fifteen (15) days of the contract signature by both parties. Where a performance security is required, the receipt of the performance security by UNDP shall be a condition for rendering the contract effective.</p>
42. Bank Guarantee for Advanced Payment	<p>42.1 Except when the interests of UNDP so require, it is UNDP's standard practice to not make advance payment(s) (i.e., payments without having received any outputs). If an advance payment is allowed as per the BDS, and exceeds 20% of the total contract price, or USD 30,000, whichever is less, the Bidder shall submit a Bank Guarantee in the full amount of the advance payment in the form available at https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Contract%20Management%20Payment%20and%20Taxes_Advanced%20Payment%20Guarantee%20Form.docx&action=default</p>
43. Liquidated Damages	<p>43.1 If specified in the BDS, 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 Contract.</p>

44. Payment Provisions	44.1 Payment will be made only upon UNDP's acceptance of the goods and/or services performed. The terms of payment shall be within thirty (30) days, after receipt of invoice and certification of acceptance of goods and/or services issued by the proper authority in UNDP with direct supervision of the Contractor. Payment will be effected by bank transfer in the currency of the contract.
45. Vendor Protest	45.1 UNDP's vendor protest procedure provides an opportunity for appeal to those persons or firms not awarded a contract through a competitive procurement process. In the event that a Bidder believes that it was not treated fairly, 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
46. Other Provisions	<p>46.1 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>46.2 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>46.3 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. Bid Data Sheet

The following data for the goods and/or services to be procured shall complement, supplement, or amend the provisions in the Invitation to Bid In the case of a conflict between the Instructions to Bidders, the Bid Data Sheet, and other annexes or references attached to the Bid Data Sheet, the provisions in the Bid Data Sheet shall prevail.

BDS No.	Ref. to Section.2	Data	Specific Instructions / Requirements
1	7	Language of the Bid	English
2		Submitting Bids for Parts or sub-parts of the Schedule of Requirements (partial bids)	Allowed [The Bidder is allowed to submit Bids as per the requirements specified in Section 5a. UNDP shall only consider the bid offered by the Bidder whose Bid fully complies with the requirements. Partial Bid by Lot will be considered.]
3	20	Alternative Bids	Shall be considered. A Bidder may submit an alternative Bid, <u>but only if it</u> also submits a Bid that meets the base case (i.e., what is originally required by UNDP in this ITB). Such alternative proposal must be clearly indicated in the submission. UNDP shall only consider the alternative bid offered by the Bidder whose Bid for the base case was determined to be a responsive Bid that offers the lowest price.
4	21	Pre-Bid conference	Will not be conducted
5	16	Bid Validity Period	120 days
6	13	Bid Security	Not Required
7	41	Advanced Payment upon signing of contract	Not Allowed
8	42	Liquidated Damages	Will be imposed as follows: Percentage of contract price per day of delay: 0.5 Max. number of days of delay 20, after which UNDP may terminate the contract.
9	40	Performance Security	Not Required

10	12	Currency of Bid	<p>Euro</p> <p>Chinese Renminbi</p> <p>No payments will be made in United States Dollars.</p>
11	31	Deadline for submitting requests for clarifications/ questions	7 days before the submission deadline
12	31	Contact Details for submitting clarifications/questions	<p>Focal Person in UNDP: Ms. Xiao Yi</p> <p>Address: No2, Liangmahe Nanlu, Beijing</p> <p>E-mail address: bids.china@undp.org</p>
13	18, 19 and 21	Manner of Disseminating Supplemental Information to the ITB and responses/clarifications to queries	Direct communication to prospective Proposers by email and Posting on the website UNGM & UNDP Procurement webpage
14	23	Deadline for Submission	<p>Date and Time:</p> <p>September 25, 2018 12:00 PM</p> <p>Beijing time</p>
14	22	Allowable Manner of Submitting Bids	<input checked="" type="checkbox"/> Submission by email
15	22	Bid Submission Address	bids.china@undp.org
16	22	Electronic submission (email or eTendering) requirements	<ul style="list-style-type: none"> ▪ Format: PDF files only ▪ File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. ▪ All files must be free of viruses and not corrupted. ▪ Max. File Size per transmission: 5MB ▪ Mandatory subject of email: UNDP DPRK ITB 2018001 ▪ Password must be set for all your bidding documents ▪ Password must not be provided to UNDP until the date and time of Bid Opening as indicated in No. 17
17	25	Date, time and venue for the opening of bid	<p>Date and Time: September 25, 2018 2:00 PM</p> <p>Beijing time</p> <p>Venue: UN Large Conference Room, No. 2 Liangmahe Nanlu, Chaoyang District, Beijing</p>
18	27, 36	Evaluation Method for the Award of Contract	Lowest priced technically responsive, eligible and qualified bid.
19		Expected date for	<i>As soon as possible</i>

		commencement of Contract	
20		Maximum expected duration of contract	Will be determined at contract award
21	35	UNDP will award the contract to:	One or more Proposers, depending on the following factors : Depending on the evaluation result
22	39	Type of Contract	Contract for Goods and/or Services to UNDP http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
23	39	UNDP Contract Terms and Conditions that will apply	UNDP General Terms and Conditions for Contracts http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
24		Delivery Date	<i>Maximum 4 weeks after contract signature</i>

Section 4. Evaluation Criteria

Preliminary Examination Criteria

Bids will be examined to determine whether they are complete and submitted in accordance with ITB requirements as per below criteria on a Yes/No basis:

- Appropriate signatures
- Power of Attorney
- Minimum Bid documents provided
- Bid Validity

Minimum Eligibility and Qualification Criteria

Eligibility and Qualification will be evaluated on a Pass/Fail basis.

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

Subject	Criteria	Document Submission requirement
ELIGIBILITY		
Legal Status	Vendor is a legally registered entity.	Form B: Bidder Information Form
Eligibility	Vendor is not suspended, nor debarred, nor otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization in accordance with ITB clause 3.	Form A: Bid Submission Form
Conflict of Interest	No conflicts of interest in accordance with ITB clause 4.	Form A: Bid Submission Form
Bankruptcy	Has not declared bankruptcy, is 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 A: Bid Submission Form
Certificates and Licenses	<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 B: Bidder Information Form
QUALIFICATION		
History of Non-Performing Contracts¹	Non-performance of a contract did not occur as a result of contractor default for the last 3 years.	Form D: Qualification Form

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 History	No consistent history of court/arbitral award decisions against the Bidder for the last 3 years.	Form D: Qualification Form
Previous Experience	Minimum 3 years of relevant experience.	Form D: Qualification Form
	<p>Minimum 3 contracts of similar value, nature and complexity implemented over the last 3 years. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i></p> <p>At least one of the purchase orders / contracts shall be of an amount above US\$ 100,000.</p> <p>Each purchase order / contract shall clearly indicate the type and quantities of items and technical specifications, contract amount, date, and customer's current contact details for references to be sought.</p>	Form D: Qualification Form
Financial Standing	<p>Minimum average annual turnover of USD500,000 for the last 3 years.</p> <p>Quick Ratio (current assets / current liabilities) > 1.0.</p> <p><i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i></p>	Form D: Qualification Form
	<p>Bidder must demonstrate the current soundness of its financial standing and indicate its prospective long-term profitability. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i></p>	Form D: Qualification Form
Technical Evaluation	<p>The technical bids shall be evaluated on a pass/fail basis for compliance or non-compliance with the technical specifications identified in the bid document.</p> <p>Time schedule for supply, transportation, installation, commissioning, documents, inspection test and training compliance if applicable.</p> <p>Proof of after-sales service capacity and appropriateness of local service and technical support available in DPRK or close by regions</p> <p>Statement of warranty of defects in materials, workmanship, operation and performance guarantee, backed by the manufacturers guarantee on the main components where applicable.</p>	Form E: Technical Bid Form
Financial Evaluation	Detailed analysis of the price schedule based on requirements listed in Section 5 and quoted for by the bidders in Form F.	Form F: Price Schedule Form

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.

	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.	
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Section 5a: Schedule of Requirements and Technical Specifications

All goods will be delivered within 4 weeks after contract signature to 10 SES project sites as follows:

1. Oup (Township), Unsan County, North Pyongan Province, DPR Korea (UO)
2. Jwa Ri, Unsan County, North Pyongan Province, DPR Korea (JR)
3. Alil Dong, Kaechon City, South Pyongan Province, DPR Korea (AL)
4. Oup (Township), Hoechang County, South Pyongan Province, DPR Korea (HO)
5. Tokryon Ri, Hoechang County, South Pyongan Province, DPR Korea (TR)
6. Ryongam Ri, Yangdok County, South Pyongan Province, DPR Korea (RA)
7. Sagi Ri, Yangdok County, South Pyongan Province, DPR Korea (SG)
8. Oup (Township), Singye County, North Hwanghae Province, DPR Korea (SO)
9. Taesong Ri, Singye County, North Hwanghae Province, DPR Korea (TS)
10. Wongyo Ri, Singye County, North Hwanghae Province, DPR Korea (WG)

List of Materials with Technical Specifications

Lot 1. List of materials for the small hydropower plants

Delivery Sites: RA, SG, and SO

1. Ryongam Ri, Yangdok County, South Pyongan Province, DPR Korea (RA)
2. Sagi Ri, Yangdok County, South Pyongan Province, DPR Korea (SG)
3. Oup (Township), Singye County, North Hwanghae Province, DPR Korea (SO)

No	Materials	Technical Specification	Quantity				
			Unit	RA	SG	SO	Total
1	Cement	Portland, P≥27MPa	t	300	460	280	1040.0
2	Steel bar	Φ 6mm (for gabion)	t			9.0	9.0
		Φ 8 mm	t	5.3	2.3	1.0	8.6
		Φ 12 mm	t	9.5	4.0	3.5	17.0
		Φ 16 mm	t			4.0	4.0
		Φ 20 mm	t		3.0		3.0
3	Steel plate	5 mm in thickness	t			9.0	9.0
		6 mm in thickness	t	13	9	7.5	29.5
4	Horizontal water stop plate	Material: High pressure polyester Width: 300 mm Tensile strength: 12MPa Elongation: 190~250% Water pressure: 1.2MPa Variation ratio on the tensile strength and elongation: 10% Variation ratio on the mass: 2%	m	105	300	70	475.0
5	Vertical water stop plate	Material: High pressure polyester Width: 300 mm	m		50		50.0

No	Materials	Technical Specification	Quantity				
			Unit	RA	SG	SO	Total
		Tensile strength: 12MPa Elongation: 190~250% Water pressure: 1.2MPa Variation ratio on the tensile strength and elongation: 10% Variation ratio on the mass: 2%					
6	Square timber for formwork	50x50 mm in width, 2 m in minimum length	m ³	3	3.7	4	10.7
		50x100 mm in width, 2 m in minimum length	m ³	6.5	2		8.5
7	Wooden board for formwork	20 mm in thickness, 150 mm in width, 2m in minimum length	m ³	6.0	11.7	4.5	22.2
8	Nail	100mm in length	kg	65.0	60	50	175.0
		70mm in length	kg	50.0	50	50	150.0
9	Screw Nail	Screw type, 100mm in length	kg	20	10	10	40.0
10	Concrete adhere material	liquid type, for purpose of bond between old concrete and new mixture, strength after adhering: same as the concrete block	kg		200		200.0
11	Welding rod	Φ 5mm	kg	500	300	600	1400
12	Welding machine	Input voltage: 1~380V, input power: 38KVA,50/60Hz,output currency:500A,regulation range of currency: 100~500A	pc	1	1	1	3
13	Enamel painting material (for equipment)	With blue, green, brown, red orange color	kg	50	240	50	340.0
14	Insulated door	Better wooden material made, foam plastic inside with K≤0.04W/(mk) and 40mm thickness, air leakage prevented with sealing, enamel painting with red orange or dark brown color	m ²	8	8	8	24
15	Window	Plastic, double glazed, white color, air leakage prevented with sealing	m ²	10	5	5	20.0
16	Steel wire	With Ø4 mm	t	1.0	2.5	0.5	4.0
17	Hammer drill	780W	pc		2		2.0
18	Drill edge	Φ12,Φ14,Φ16	pc		50		50.0
19	Tile for operator's room	Ceramic type, size 300x300mm, red orange or dark brown color	m ²	50	60	50	160.0
20	Glass	5mm in thickness	m ²	6	8	6	20.0
21	Painting material	Acrylic type, water proof property, white or light green	kg	250	226	300	776.0
22	Galvanized steel sheet	1000×2000×1.0mm,	t	0.1	0.15	0.5	0.75
23	Roofing material	Galvanized corrugated iron roof, 0.55mm thickness	m ²	70	150	100	320.0
24	Electric wire	Material: Aluminium, size:10mm ²	km	6			6.0
		Material: Aluminium, size: 25mm ²	km		18		18.0
		Material: Aluminium, size: 70mm ²	km			0.6	0.6
25	Power pole	Material: Q235 steel Length: 8m Diameter: 140 mm Thickness: 5mm	pc	40	120	5	165.0
26	Insulator	for low voltage transmission line	pc	160	480	20	660.0
27	L-shape steel	L75×6, 4m in minimum length	t	0.6	2	0.3	2.9
		L56×4, 4m in minimum length	t	1.6	1.6	0.85	4.05
		L80×6, 4m in minimum length	t	0.5	0.45	0.3	1.25
28	Bolt and nuts	M16x310	pc	250	800	40	1,090.0

No	Materials	Technical Specification	Quantity				
			Unit	RA	SG	SO	Total
29	3.3kV power cables	Type: Indoor, dry; Core: Copper; Rated voltage: 3.3 kV; Cover: PVC; Size: 3 cores, 10 mm ²	m	100	100		200.0
30	0.4kV power cables	Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 4 cores, 20 mm ² in cross section	m			200	200.0
31		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 4 cores, 75 mm ²	m	200	200		400.0
32		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 4 cores, 50mm ²	m	100	100		200.0
33		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 2 cores, 4mm ²	m	150	150	150	450.0
34		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 2 cores, 50mm ²	m	50	50		100.0
35	Control cables	Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 4 cores, 2.5 mm ² in cross section	m	100	200	100	400.0
36		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 7 cores, 1.5 mm ² in cross section	m	100	200	100	400.0
37		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 5 cores, 1.5 mm ² in cross section	m	100	200	100	400.0
38		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 2 cores, 2.5 mm ² in cross section	m	100	200	100	400.0
39	Cable connection Facility	Type: indoor, terminal; Rated voltage: 3.3kV; Size: 3phase, 10 mm ²	Set	4	4	4	12
40	Terminal	Size: 25mm ² Core: Copper	pc	50	50		100
		Size: 20mm ² Core: Copper	pc			50	50

Lot 2. List of materials for solar energy use

Delivery Site: UO, JR, HO, TR, AL, RA, WG, and SO

1. Oup (Township), Unsan County, North Pyongan Province, DPR Korea (UO)
2. Jwa Ri, Unsan County, North Pyongan Province, DPR Korea (JR)
3. Oup (Township), Hoechang County, South Pyongan Province, DPR Korea (HO)
4. Tokryon Ri, Hoechang County, South Pyongan Province, DPR Korea (TR)
5. Alil Dong, Kaechon City, South Pyongan Province, DPR Korea (AL)
6. Ryongam Ri, Yangdok County, South Pyongan Province, DPR Korea (RA)
7. Wongyo Ri, Singye County, North Hwanghae Province, DPR Korea (WG)
8. Oup (Township), Singye County, North Hwanghae Province, DPR Korea (SO)

No	Materials	Technical Specification	Quantity									
			Unit	UO	JR	HO	TR	AL	RA	WG	SO	Total
1	Electric wire (single multicore copper wire coated with	2 mm ² in cross section	m	300	20	100	100	60				580
		6 mm ² in cross section	m	60	40	60	60					220
		10 mm ² in cross section	m	50		180	150	30				410
		10 mm ² in cross section; Rated voltage, 700VDC; Outer sheath color,	m							250		250

No	Materials	Technical Specification	Quantity									
			Unit	UO	JR	HO	TR	AL	RA	WG	SO	Total
	synthetic resin)	red										
		10 mm ² in cross section; Rated voltage, 700VDC; Outer sheath color, black	m							250		250
		30 mm ² in cross section	m			30						30
		50 mm ² in cross section; Rated voltage, 240VAC; enough mechanical strength for grid installation	m							2000		2000
		50 mm ² in cross section; Rated voltage, 48 VDC; Outer sheath color, red	m							250		250
		50 mm ² in cross section; Rated voltage, 48 VDC; Outer sheath color, black	m							250		250
2	Power cable	Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 0.6kV; Outer sheath color, black	m							200		200
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 0.6kV; Outer sheath color, red	m							200		200
		Multicore copper wire coated with different color synthetic resin; 20 mm ² in cross section; Rated voltage, 24 VDC; Outer sheath color, red	m								20	20
		Multicore copper wire coated with different color synthetic resin; 20 mm ² in cross section; Rated voltage, 24 VDC; Outer sheath color, black	m								20	20
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 36 VDC; Outer sheath color, red	m								40	40
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 36VDC; Outer sheath color, black	m								40	40
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 48VDC; Outer sheath color, red	m							100		100
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 48VDC; Outer sheath color, red	m							100		100
3	Breaker	Uninterruptable maximum current 10A	pc					2				2
		Uninterruptable maximum current 20A	pc	2	2	2	1					7
		Uninterruptable maximum current 25A	pc		1	1						2
		Uninterruptable maximum current 30A	pc					2				2
		Uninterruptable maximum current 50A	pc				2					2

No	Materials	Technical Specification	Quantity									
			Unit	UO	JR	HO	TR	AL	RA	WG	SO	Total
		Uninterruptable maximum current 60A	pc	4								4
4	Shunt	Rated voltage, 24VDC, Rewireable fuse or circuit breaker with uninterruptable current of 8A	pc							30		30
5	Cooper Terminal	Maximum current 10A	pc	28	11	16	6	10				71
		Maximum current 20A	pc	18	10	9	10					47
		Maximum current 25A	pc	44	10	32	8					94
		Maximum current 50A	pc	18			20					38
		Maximum current 60A	pc					10				10
6	Angle steel for frame	Galvanized steel bar, 50(H)x30(W)x3(T)mm in size, 4m in minimum length	m	96	50	246	48	45		350	30	865
7	Bolt & nut for tightening	M10x50mm	set	80	20	430	150	30	100	1300	160	2270
		M12x70mm	pc							60		60
		M12x100mm	pc							1200	190	1390
		M16x70mm	pc							80		80
8	Anchor bolt for tightening	M12x100mm	pc	40	10	240	90	20	50		150	600
9	Welding rod	4mm in diameter, for carbon steel	kg	10	5	70	5	3		60		153
10	Cement	Portland, >27MPa	tonne		0.05		1.5		1	75	4.5	82.05
11	Steel bar (Mild steel)	Ø8	tonne						0.12	1	0.48	1.6
		Ø10	tonne		0.05		0.1		0.05	1.5	0.25	1.95
		Ø12	tonne		0.02		0.15		0.08	0.5	0.32	1.07
12	Steel plate	5mm(0.3x0.3m) in thickness	pc		1							1
		Mild steel, thickness no less than 4mm;	m ²							4		4
		galvanized steel, thickness 3mm;	m ²							20	2	22
		Galvanized steel, thickness 1mm;	m ²							120		120
13	Steel wire (Mild steel)	1mm in diameter	kg		0.5							0.5
		No less than 1.5mm in diameter	kg							40		40
14	Steel pipe	Drawn steel; 32mm in diameter	m				10		50			60
		Drawn steel; seamless steel pipe, φ50, Wall thickness, more than 4 mm, 2.0 MPa	m							120		120
		Galvanized steel; φ120, Wall thickness, more than 4 mm	m							260	30	290
15	Rectangle steel pipe	Galvanized steel, 50(H)x100(W)x5(T)mm in size, 4m in minimum length	m							480	40	520
16	Steel pipe and fittings	Nominal outside diameter (DN): ≥ 2 inch; Wall thickness: ≥ 2.5 mm; Socket length: ≥ 20 mm; Range of working temperatures: -30 - 40 °C or better; Maximum working pressure: ≥ 10 bar; Materials of construction: Stainless steel, galvanized steel or other equivalent antirust coat steel;	m				300					300
17	Sealing ring	Materials, rubber; for piping of φ50	pc							15		15
18	Wooden board	12mm thickness, 250mm width, 4m in minimum length	m		8		50		50	100		208
19	Wooden	50 x50mm, 4m in minimum length	m		8		50		50	100		208

No	Materials	Technical Specification	Quantity									
			Unit	UO	JR	HO	TR	AL	RA	WG	SO	Total
	square											
20	Nail	50mm	kg		0.5		5		5	10		20.5
21	Plastic Pipe	Material, PPR; $\phi 50 \times 6.3$, 0.6 MPa	m							1,500		1500
22	Plastic T pipe	Materials, PPR; $\phi 50 \times 50$, 0.6 MPa	pc							5		5
23	PPR 90 bend	$\phi 50$, 0.6 MPa	pc							8		8
24	Insulated door	Arch tree or better wooden material made, foam plastic inside with $K \leq 0.04 \text{ W/(mK)}$ and 40mm thickness, air leakage prevented with sealing, enamel painting with red orange or dark brown color	m ²							4		4
25	Pipe insulation material	Foam rubber pipe section type, $\phi 50 \times 80$, 0.034W/(mK)	m							120		120
26	Ladder	Material: stainless steel, Height 2.5m, width 0.5m, rung interval 0.3m	m							1		1
27	Nail	Screw type, 100mm in length	kg							30		30
28	Window	Plastic, double glazed, white color, air leakage prevented with sealing	m ²							5		5
29	Tile for washing room floor	Ceramic type, size 300x300mm, bright color series	m ²								40	40
30	Painting material	Acrylic type, water proof property, white or light blue	kg							50		50
31	Roofing material	Materials, galvanized steel; type, corrugated; thickness no less than 1mm	m ²							25		25

Lot 3. List of materials for hydraulic ram and biogas

Delivery Site: JR and TS

1. Jwa Ri, Unsan County, North Pyongan Province, DPR Korea (JR)
2. Taesong Ri, Singye County, North Hwanghae Province, DPR Korea (TS)

No	Materials	Technical Specification	Quantity			
			Unit	JR	TS	Total
1	Drive pipe	$\Phi 150$ (outside diameter) $\times 6$ (thickness), steel pipe, more than 0.6MPa	m	4		4
2	Sluice valve	$\Phi 150$, steel, more than 0.6MPa, with flanges, bolts and nuts	set	1		1
3	Cement	Portland, >27MPa	tonne	0.5	43	43.5
4	Steel bar	$\phi 12$ mm, 0.888kg/m, type: bundle of straight bar, bundle length: 9m	t		3	3
		$\phi 8$ mm, 0.395kg/m, type: bundle of straight bar, bundle length: 9m	t		1.3	1.3
5	Steel pipe	GI coated, DN32 thickness: 2.6mm	m		321	321
6	Steel plate	Mild iron, thickness 5mm	m ²		16.2	16.2
7	Plastic sheet	PVC, thickness: 0.2mm	m ²		600	600
8	Plastic pipe	PVC, PN6.3, thickness 7.7mm, DN250	m		12	12
		PVC, PN6.3, DN75	m	110		110
		PE80, PN10, SDR13.6, DN25	m		300	300

No	Materials	Technical Specification	Quantity			
			Unit	JR	TS	Total
		PE, flexible, ϕ 12mm	m		300	300
		PE, flexible, ϕ 25mm	m		60	60
9	Equal coupling	PE80, PN10, SDR13.6, S25-25	pc		60	60
10	90° Elbow	PE80, PN10, SDR13.6, L25	pc		40	40
11	Equal T connector	PE80, PN10, SDR13.6, T25	pc		6	6
12	Reducing coupling	PE80, PN10, SDR13.6, 25*20	pc		20	20
		PE80, PN10, SDR13.6, 20*12	pc		20	20
13	Waterproof agent	get type or equivalent for air tightening concrete surface	kg		10	10
14	Plastic door	height*width: 1.8*0.8m double glass, including handle and locks	pc		3	3
15	Plastic rope	5-7 mm diameter, 100 m/roll	roll		10	10
16	Welding rod	for mild steel, Φ 4mm	kg		200	200
17	Red lead	10kg/box	box		1	1
18	Enamel paint	brown, 5kg/box	box		2	2
19	Enamel thinner	5 liter/box	box		2	2
20	Electric wire	4 cores, copper wire coated with synthetic resin, 3 mm ² in cross section	m		50	50

Disclaimer: Procurement of items listed in this ITB are subject to, and contingent on, applicable exemption(s) being obtained from the Security Council Committee established pursuant to resolution 1718 (2006).

Section 5b: Other Related Requirements

Further to the Schedule of Requirements in the preceding Table, Bidders are requested to take note of the following additional requirements, conditions, and related services pertaining to the fulfillment of the requirements:

Delivery Term [INCOTERMS 2010] <i>(Pls. link this to price schedule)</i>	DAP, 10 project sites in DPRK
Exact Address of Delivery/Installation Location	<ol style="list-style-type: none"> 1. Oup (Township), Unsan County, North Pyongan Province, DPR Korea (UO) 2. Jwa Ri, Unsan County, North Pyongan Province, DPR Korea (JR) 3. Alil Dong, Kaechon City, South Pyongan Province, DPR Korea (AL) 4. Oup (Township), Hoechang County, South Pyongan Province, DPR Korea (HO) 5. Tokryon Ri, Hoechang County, South Pyongan Province, DPR Korea (TR) 6. Ryongam Ri, Yangdok County, South Pyongan Province, DPR Korea (RA) 7. Sagi Ri, Yangdok County, South Pyongan Province, DPR Korea (SG) 8. Oup (Township), Singye County, North Hwanghae Province, DPR Korea (SO) 9. Taesong Ri, Singye County, North Hwanghae Province, DPR Korea (TS) 10. Wongyo Ri, Singye County, North Hwanghae Province, DPR Korea (WG)
Mode of Transport Preferred	Land or Sea
UNDP Preferred Freight Forwarder, if any ²	N/A
Distribution of shipping documents <i>(if using freight forwarder)</i>	N/A
Customs, if required, clearing shall be done by:	Supplier
Ex-factory / Pre-shipment inspection	N/A
Inspection upon delivery	UNDP designated staff and experts will conduct the inspection and certify delivery
Installation Requirements	N/A
Testing Requirements	N/A
Scope of Training on Operation and Maintenance	N/A
Commissioning	N/A
Warranty Period	Warranty for minimum period of 2 years

²A factor of the Incoterms stipulated in the ITB. The use of a UNDP preferred freight forwarder may be considered for purposes of ensuring forwarder's familiarity with procedures and processing of documentary requirements applicable to UNDP when clearing with customs authority of the country of destination.

Local Service Support	N/A
Technical Support Requirements	All documentations, including catalogues, instructions and operating manuals, shall be in English
After-sale services Requirements	<input checked="" type="checkbox"/> Warranty on Parts and Labor for minimum period of 2 years <input type="checkbox"/> Technical Support <input type="checkbox"/> Provision of Service Unit when pulled out for maintenance /repair <input type="checkbox"/> Others <i>[pls. specify]</i>
Payment Terms <i>(max. advanced payment is 20% as per UNDP policy)</i>	100% within 30 days upon UNDP's acceptance of the goods delivered as specified and receipt of invoice
Conditions for Release of Payment	<input type="checkbox"/> Pre-shipment inspection <input checked="" type="checkbox"/> Inspection upon arrival at destination <input type="checkbox"/> Installation <input type="checkbox"/> Testing <input type="checkbox"/> Training on Operation and Maintenance <input type="checkbox"/> Others <i>[pls. specify]</i> <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	English

Section 6: Returnable Bidding Forms / Checklist

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

Before submitting your Bid, please ensure compliance with the Bid Submission instructions of the BDS 16.

Technical Bid:

Have you duly completed all the Returnable Bidding Forms?	
▪ Form A: Bid Submission Form	<input checked="" type="checkbox"/>
▪ Form B: Bidder Information Form	<input checked="" type="checkbox"/>
▪ Form C: Joint Venture/Consortium/ Association Information Form	<input checked="" type="checkbox"/>
▪ Form D: Qualification Form	<input checked="" type="checkbox"/>
▪ Form E: Format of Technical Bid/Bill of Quantities	<input checked="" type="checkbox"/>
Have you provided the required documents to establish compliance with the evaluation criteria in Section 4?	<input checked="" type="checkbox"/>

Price Schedule:

▪ Form F: Price Schedule Form	<input checked="" type="checkbox"/>
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Form A: Bid Submission Form

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	[Insert ITB Reference Number]		

We, the undersigned, offer to supply the goods and related services required for [Insert Title of goods and services] in accordance with your Invitation to Bid No. [Insert ITB Reference Number] and our Bid. We hereby submit our Bid, which includes this Technical Bid and Price Schedule.

Our attached Price Schedule is for the sum of [Insert amount in words and figures and indicate currency].

We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/Consortium /Association members or subcontractors or suppliers for any part of the contract:

- a) 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;
- b) have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization;
- c) have no conflict of interest in accordance with Instruction to Bidders Clause 4;
- d) 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);
- e) 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;
- f) undertake not to engage in proscribed practices, including but not limited to corruption, fraud, coercion, collusion, obstruction, 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 embrace the principles of the United Nations Supplier Code of Conduct and adhere to the principles of the United Nations Global Compact.

We declare that all the information and statements made in this Bid are true and we accept that any misinterpretation or misrepresentation contained in this Bid may lead to our disqualification and/or sanctioning by the UNDP.

We offer to supply the goods and related services in conformity with the Bidding documents, including the UNDP General Conditions of Contract and in accordance with the Schedule of Requirements and Technical Specifications.

Our Bid shall be valid and remain binding upon us for the period specified in the Bid Data Sheet.

We understand and recognize that you are not bound to accept any Bid you receive.

I, the undersigned, certify that I am duly authorized by [Insert Name of Bidder] to sign this Bid and bind it should UNDP accept this Bid.

Name: _____

Title: _____

Date: _____

Signature: _____

[Stamp with official stamp of the Bidder]

Form B: Bidder Information Form

Legal name of Bidder	[Complete]
Legal address	[Complete]
Year of registration	[Complete]
Bidder's Authorized Representative Information	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]
Are you a UNGM registered vendor?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, [insert UGNM vendor number]
Are you a UNDP vendor?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, [insert UNDP vendor number]
Countries of operation	[Complete]
No. of full-time employees	[Complete]
Quality Assurance Certification (e.g. ISO 9000 or Equivalent) <i>(If yes, provide a Copy of the valid Certificate):</i>	[Complete]
Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? <i>(If yes, provide a Copy of the valid Certificate):</i>	[Complete]
Does your Company have a written Statement of its Environmental Policy? <i>(If yes, provide a Copy)</i>	[Complete]
Does your organization demonstrates significant commitment to sustainability through some other means, for example internal company policy documents on women empowerment, renewable energies or membership of trade institutions promoting such issues	[Complete]
Is your company a member of the UN Global Compact	[Complete]
Contact person that UNDP may contact for requests for clarifications during Bid evaluation	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]
Please attach the following documents:	<ul style="list-style-type: none"> Company Profile, which should <u>not</u> exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods and/or services being procured

	<ul style="list-style-type: none"> ▪ Certificate of Incorporation/ Business Registration ▪ 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 ▪ Trade name registration papers, if applicable ▪ Quality Certificate (e.g., ISO, etc.) and/or other similar certificates, accreditations, awards and citations received by the Bidder, if any ▪ 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 ▪ Patent Registration Certificates, if any of technologies submitted in the Bid is patented by the Bidder ▪ Certification or authorization to act as Agent on behalf of the Manufacturer, or Power of Attorney. ▪ Export Licenses, if applicable ▪ Local Government permit to locate and operate in assignment location, if applicable ▪ Official Letter of Appointment as local representative, if Bidder is submitting a Bid on behalf of an entity located outside the country ▪ Proof of after-sales service capacity and appropriateness of local service and technical support available in DPRK or close by regions ▪ Statement of warranty of defects in materials, workmanship, operation and performance guarantee, backed by the manufacturers guarantee on the main components where applicable.
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Form C: Joint Venture/Consortium/Association Information Form

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	[Insert ITB Reference Number]		

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 and/or services to be performed
1	[Complete]	[Complete]
2	[Complete]	[Complete]
3	[Complete]	[Complete]

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)	[Complete]
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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 UNDP for the fulfillment of the provisions of the Contract.

Name of partner: _____ Name of partner: _____

Signature: _____ Signature: _____

Date: _____ Date: _____

Name of partner: _____ Name of partner: _____

Signature: _____ Signature: _____

Date: _____ Date: _____

Form D: Eligibility and Qualification Form

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	[Insert ITB Reference Number]		

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

History of Non- Performing Contracts

<input type="checkbox"/> Non-performing contracts did not occur 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 (in US\$)	Contract Identification	Total Contract Amount (current value in US\$)
		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 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 by UNDP.

Project name & Country of Assignment	Client & Reference Contact Details	Contract Value	Period of activity and status	Types of activities undertaken
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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	Year	USD
	Year	USD
	Year	USD
Latest Credit Rating (if any), indicate the source		

Financial information (in US\$ equivalent)	Historic information for the last 3 years		
	Year 1	Year 2	Year 3
	<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			

☐ 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:

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

Form E: Format of Technical Bid

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	[Insert ITB Reference Number]		

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 and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	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>	<i>(confirm that you comply or indicate your delivery date)</i>		
Lot 1. Delivery Sites: RA, SG, and SO: 1. Ryongam Ri, Yangdok County, South Pyongan Province, DPR Korea (RA); 2. Sagi Ri, Yangdok County, South Pyongan Province, DPR Korea (SG); 3. Oup (Township), Singye County, North Hwanghae Province, DPR Korea (SO)							
No	Item	Technical Specification					
1	Cement	Portland, P≥27MPa					
2	Steel bar	Φ 6mm (for gabion)					
		Φ 8 mm					
		Φ 12 mm					
		Φ 16 mm					
		Φ 20 mm					
3	Steel plate	5 mm in thickness					
		6 mm in thickness					
4	Horizontal water stop plate	Material: High pressure polyester Width: 300 mm Tensile strength: 12MPa Elongation: 190~250% Water pressure: 1.2MPa Variation ratio on the tensile strength and elongation: 10% Variation ratio on the mass: 2%					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
5	Vertical water stop plate	Material: High pressure polyester Width: 300 mm Tensile strength: 12MPa Elongation: 190~250% Water pressure: 1.2MPa Variation ratio on the tensile strength and elongation: 10% Variation ratio on the mass: 2%					
6	Square timber for formwork	50x50 mm in width, 2 m in minimum length					
		50x100 mm in width, 2 m in minimum length					
7	Wooden board for formwork	20 mm in thickness, 150 mm in width, 2m in minimum length					
8	Nail	100mm in length					
		70mm in length					
9	Screw Nail	Screw type, 100mm in length					
10	Concrete adhere material	liquid type, for purpose of bond between old concrete and new mixture, strength after adhering: same as the concrete block					
11	Welding rod	Φ 5mm					
12	Welding machine	Input voltage: 1~380V, input power: 38KVA,50/60Hz,output currency:500A,regulation range of currency: 100~500A					
13	Enamel painting	With blue, green, brown, red orange color					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
	material (for equipment)						
14	Insulated door	Better wooden material made, foam plastic inside with $K \leq 0.04W/(mk)$ and 40mm thickness, air leakage prevented with sealing, enamel painting with red orange or dark brown color					
15	Window	Plastic, double glazed, white color, air leakage prevented with sealing					
16	Steel wire	With Ø4 mm					
17	Hammer drill	780W					
18	Drill edge	Φ12,Φ14,Φ16					
19	Tile for operator's room	Ceramic type, size 300x300mm, red orange or dark brown color					
20	Glass	5mm in thickness					
21	Painting material	Acrylic type, water proof property, white or light green					
22	Galvanized steel sheet	1000×2000×1.0mm,					
23	Roofing material	Galvanized corrugated iron roof, 0.55mm thickness					
24	Electric wire	Material: Aluminium, size:10mm ²					
		Material: Aluminium, size: 25mm ²					
		Material: Aluminium, size: 70mm ²					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
25	Power pole	Material: Q235 steel Length: 8m Diameter: 140 mm Thickness: 5mm					
26	Insulator	for low voltage transmission line					
27	L-shape steel	L75×6, 4m in minimum length					
		L56x4, 4m in minimum length					
		L80x6, 4m in minimum length					
28	Bolt and nuts	M16x310					
29	3.3kV power cables	Type: Indoor, dry; Core: Copper; Rated voltage: 3.3 kV; Cover: PVC; Size: 3 cores, 10 mm ²					
30	0.4kV power cables	Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 4 cores, 20 mm ² in cross section					
31		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 4 cores, 75 mm ²					
32		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 4 cores, 50mm ²					
33		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 2 cores, 4mm ²					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
34		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 2 cores, 50mm ²					
35	Control cables	Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 4 cores, 2.5 mm ² in cross section					
36		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 7 cores, 1.5 mm ² in cross section					
37		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 5 cores, 1.5 mm ² in cross section					
38		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 2 cores, 2.5 mm ² in cross section					
39	Cable connection Facility	Type: indoor, terminal Rated voltage: 3.3kV Size: 3phase, 10 mm ²					
40	Terminal	Size: 25mm ² Core: Copper Size: 20mm ² Core: Copper					

Lot 2, Delivery Site: UO, JR, HO, TR, AL, RA, WG, and SO: 1. Oup (Township), Unsan County, North Pyongan Province, DPR Korea (UO); 2. Jwa Ri, Unsan County, North Pyongan Province, DPR Korea (JR); 3. Oup (Township), Hoechang County, South Pyongan Province, DPR Korea (HO); 4. Tokryon Ri, Hoechang County, South Pyongan Province, DPR Korea (TR); 5. Alil Dong, Kaechon City, South Pyongan Province, DPR Korea (AL); 6. Ryongam Ri, Yangdok County, South Pyongan Province, DPR Korea (RA); 7. Wongyo Ri,

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
Singye County, North Hwanghae Province, DPR Korea (WG); 8. Oup (Township), Singye County, North Hwanghae Province, DPR Korea (SO)							
No	Item	Technical Specification					
1	Electric wire (single multicore copper wire coated with synthetic resin)	2 mm ² in cross section					
		6 mm ² in cross section					
		10 mm ² in cross section					
		10 mm ² in cross section; Rated voltage, 700VDC; Outer sheath color, red					
		10 mm ² in cross section; Rated voltage, 700VDC; Outer sheath color, black					
		30 mm2 in cross section					
		50 mm ² in cross section; Rated voltage, 240VAC; enough mechanical strength for grid installation					
		50 mm ² in cross section; Rated voltage, 48 VDC; Outer sheath color, red					
		50 mm ² in cross section; Rated voltage, 48 VDC; Outer sheath color, black					
2	Power cable	Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 0.6kV; Outer sheath color, black					
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 0.6kV; Outer sheath color, red					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
		Multicore copper wire coated with different color synthetic resin; 20 mm ² in cross section; Rated voltage, 24 VDC; Outer sheath color, red					
		Multicore copper wire coated with different color synthetic resin; 20 mm ² in cross section; Rated voltage, 24 VDC; Outer sheath color, black					
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 36 VDC; Outer sheath color, red					
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 36VDC; Outer sheath color, black					
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 48VDC; Outer sheath color, red					
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 48VDC; Outer sheath color, red					
3	Breaker	Uninterruptable maximum current 10A					
		Uninterruptable maximum current 20A					
		Uninterruptable maximum current 25A					
		Uninterruptable maximum current 30A					
		Uninterruptable maximum current 50A					
		Uninterruptable maximum current 60A					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
4	Shunt	Rated voltage, 24VDC, Rewireable fuse or circuit breaker with uninterruptable current of 8A					
5	Cooper Terminal	Maximum current 10A					
		Maximum current 20A					
		Maximum current 25A					
		Maximum current 50A					
		Maximum current 60A					
6	Angle steel for frame	Galvanized steel bar, 50(H)x30(W)x3(T)mm in size, 4m in minimum length					
7	Bolt & nut for tightening	M10x50mm					
		M12x70mm					
		M12x100mm					
		M16x70mm					
8	Anchor bolt for tightening	M12x100mm					
9	Welding rod	4mm in diameter, for carbon steel					
10	Cement	Portland, >27MPa					
11	Steel bar (Mild steel)	Ø8					
		Ø10					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
		Ø12					
12	Steel plate	5mm(0.3×0.3m) in thickness					
		Mild steel, thickness no less than 4mm;					
		galvanized steel, thickness 3mm;					
		Galvanized steel, thickness 1mm;					
13	Steel wire (Mild steel)	1mm in diameter					
		No less than 1.5mm in diameter					
14	Steel pipe	Drawn steel; 32mm in diameter					
		Drawn steel; seamless steel pipe, φ50, Wall thickness, more than 4 mm, 2.0 MPa					
		Galvanized steel; φ120, Wall thickness, more than 4 mm					
15	Rectangle steel pipe	Galvanized steel,50(H)X100(W)X5(T)mm in size, 4m in minimum length					
16	Steel pipe and fittings	Nominal outside diameter (DN): ≥ 2 inch; Wall thickness: ≥ 2.5 mm; Socket length: ≥ 20 mm; Range of working temperatures: -30 - 40 °C or better; Maximum working pressure: ≥ 10 bar; Materials of construction: Stainless steel, galvanized steel or other					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
		equivalent antirust coat steel;					
17	Sealing ring	Materials, rubber; for piping of $\phi 50$					
18	Wooden board	12mm thickness, 250mm width, 4m in minimum length					
19	Wooden square	50 x50mm, 4m in minimum length					
20	Nail	50mm					
21	Plastic Pipe	Material, PPR; $\phi 50 \times 6.3$, 0.6 MPa					
22	Plastic T pipe	Materials, PPR; $\phi 50 \times 50$, 0.6 MPa					
23	PPR 90 bend	$\phi 50$, 0.6 MPa					
24	Insulated door	Arch tree or better wooden material made, foam plastic inside with $K \leq 0.04 \text{ W/(mK)}$ and 40mm thickness, air leakage prevented with sealing, enamel painting with red orange or dark brown color					
25	Pipe insulation material	Foam rubber pipe section type, $\phi 50 \times 80$, 0.034 W/(mK)					
26	Ladder	Material: stainless steel, Height 2.5m, width 0.5m, rung interval 0.3m					
27	Nail	Screw type, 100mm in length					
28	Window	Plastic, double glazed, white color, air leakage prevented with sealing					
29	Tile for washing room floor	Ceramic type, size 300x300mm, bright color series					
30	Painting material	Acrylic type, water proof property, white or light blue					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
31	Roofing material	Materials, galvanized steel; type, corrugated; thickness no less than 1mm					
Lot 3. Delivery Site: JR and TS: 1. Jwa Ri, Unsan County, North Pyongan Province, DPR Korea (JR); 2. Taesong Ri, Singye County, North Hwanghae Province, DPR Korea (TS)							
No	Item	Technical Specification					
1	Drive pipe	Φ150(outside diameter)x6(thickness), steel pipe, more than 0.6MPa					
2	Sluice valve	Φ150, steel, more than 0.6MPa, with flanges, bolts and nuts					
3	Cement	Portland, >27MPa					
4	Steel bar	φ12mm, 0.888kg/m, type: bundle of straight bar, bundle length: 9m					
		φ8mm, 0.395kg/m, type: bundle of straight bar, bundle length: 9m					
5	Steel pipe	GI coated, DN32 thickness: 2.6mm					
6	Steel plate	Mild iron, thickness 5mm					
7	Plastic sheet	PVC, thickness: 0.2mm					
8	Plastic pipe	PVC, PN6.3, thickness 7.7mm, DN250					
		PVC, PN6.3, DN75					
		PE80, PN10, SDR13.6, DN25					
		PE, flexible, φ12mm					
		PE, flexible, φ25mm					
9	Equal coupling	PE80, PN10, SDR13.6, S25-25					

Goods and services to be Supplied and Technical Specifications			Your response				
			Compliance with technical specifications		Delivery Date	Quality Certificate / Export Licenses, etc. (indicate all that apply and attach)	Comments
			Yes, we comply	No, we cannot comply (indicate discrepancies)	(confirm that you comply or indicate your delivery date)		
10	90°Elbow	PE80, PN10, SDR13.6, L25					
11	Equal T connector	PE80, PN10, SDR13.6, T25					
12	Reducing coupling	PE80, PN10, SDR13.6, 25*20					
		PE80, PN10, SDR13.6, 20*12					
13	Waterproof agent	get type or equivalent for air tightening concrete surface					
14	Plastic door	height*width: 1.8*0.8m double glass, including handle and locks					
15	Plastic rope	5-7 mm diameter, 100 m/roll					
16	Welding rod	for mild steel, Φ4mm					
17	Red lead	10kg/box					
18	Enamel paint	brown, 5kg/box					
19	Enamel thinner	5 liter/box					
20	Electric wire	4 cores, copper wire coated with synthetic resin, 3 mm ² in cross section					

Other Related services and requirements <i>(based on the information provided in Section 5b)</i>	Compliance with requirements		Details or comments on the related requirements
	Yes, we comply	No, we cannot comply <i>(indicate discrepancies)</i>	
Delivery Term- 10 project sites in DPRK			
Warranty on Parts and Labor for minimum period of 2 years			

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 F: Price Schedule Form

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	[Insert ITB Reference Number]		

The Bidder is required to prepare the Price Schedule following the below format. 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: [Insert Currency]

Price Schedule

The format shown on the following pages is should be used in preparing the Price Schedule.

- A) Breakdown cost of items per Lot
- B) Total Cost Per LOT (DAP):

A) Breakdown cost of items per Lot

Lot 1. List of materials for the small hydropower plants

Delivery Sites: RA, SG, and SO

No	Materials	Technical Specification	Unit	Qty	Price	
					Unit	Total
1	Cement	Portland, P \geq 27MPa	t	1040.0		
2	Steel bar	Φ 6mm (for gabion)	t	9.0		
		Φ 8 mm	t	8.6		
		Φ 12 mm	t	17.0		
		Φ 16 mm	t	4.0		
		Φ 20 mm	t	3.0		
3	Steel plate	5 mm in thickness	t	9.0		
		6 mm in thickness	t	29.5		
4	Horizontal water stop plate	Material: High pressure polyester Width: 300 mm Tensile strength: 12MPa Elongation: 190~250% Water pressure: 1.2MPa Variation ratio on the tensile strength and elongation: 10% Variation ratio on the mass: 2%	m	475.0		
5	Vertical water stop plate	Material: High pressure polyester Width: 300 mm Tensile strength: 12MPa Elongation: 190~250%	m	50.0		

№	Materials	Technical Specification	Unit	Qty	Price	
					Unit	Total
		Water pressure: 1.2MPa Variation ratio on the tensile strength and elongation: 10% Variation ratio on the mass: 2%				
6	Square timber for formwork	50x50 mm in width, 2 m in minimum length	m ³	10.7		
		50x100 mm in width, 2 m in minimum length	m ³	8.5		
7	Wooden board for formwork	20mm in thickness, 150 mm in width, 2m in minimum length	m ³	22.2		
8	Nail	100mm in length	kg	175.0		
		70mm in length	kg	150.0		
9	Screw Nail	Screw type, 100mm in length	kg	40.0		
10	Concrete adhere material	liquid type, for purpose of bond between old concrete and new mixture, strength after adhering: same as the concrete block	kg	200.0		
11	Welding rod	Φ 5mm	kg	1400		
12	Welding machine	Input voltage: 1~380V, input power: 38KVA, 50/60Hz, output current: 500A, regulation range of current: 100~500A	pc	3		
13	Enamel painting material (for equipment)	With blue, green, brown, red orange color	kg	340.0		
14	Insulated door	Better wooden material made, foam plastic inside with $K \leq 0.04W/(mk)$ and 40mm thickness, air leakage prevented with sealing, enamel painting with red orange or dark brown color	m ²	24		
15	Window	Plastic, double glazed, white color, air leakage prevented with sealing	m ²	20.0		
16	Steel wire	With Ø4 mm	t	4.0		
17	Hammer drill	780W	.pc	2.0		
18	Drill edge	Φ12, Φ14, Φ16	pc	50.0		
19	Tile for operator's room	Ceramic type, size 300x300mm, red orange or dark brown color	m ²	160.0		
20	Glass	5mm in thickness	m ²	20.0		
21	Painting material	Acrylic type, water proof property, white or light green	kg	776.0		
22	Galvanized steel sheet	1000x2000x1.0mm,	t	0.75		
23	Roofing material	Galvanized corrugated iron roof, 0.55mm thickness	m ²	320.0		
24	Electric wire	Material: Aluminium, size: 10mm ²	km	6.0		
		Material: Aluminium, size: 25mm ²	km	18.0		
		Material: Aluminium, size: 70mm ²	km	0.6		
25	Power pole	Material: Q235 steel Length: 8m Diameter: 140 mm Thickness: 5mm	pc	165.0		
26	Insulator	for low voltage transmission line	pc	660.0		
27	L-shape steel	L75x6, 4m in minimum length	t	2.9		

№	Materials	Technical Specification	Unit	Qty	Price	
					Unit	Total
		L56x4, 4m in minimum length	t	4.05		
		L80x6, 4m in minimum length	t	1.25		
28	Bolt and nuts	M16x310	pc	1,090.0		
29	3.3kV power cables	Type: Indoor, dry; Core: Copper; Rated voltage: 3.3 kV; Cover: PVC; Size: 3 cores, 10 mm ²	m	200.0		
30	0.4kV power cables	Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 4 cores, 20 mm ² in cross section	m	200.0		
31		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 4 cores, 75 mm ²	m	400.0		
32		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 4 cores, 50mm ²	m	200.0		
33		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 2 cores, 4mm ²	m	450.0		
34		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; 2 cores, 50mm ²	m	100.0		
35		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 4 cores, 2.5 mm ² in cross section	m	400.0		
36	Control cables	Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 7 cores, 1.5 mm ² in cross section	m	400.0		
37		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 5 cores, 1.5 mm ² in cross section	m	400.0		
38		Type: Indoor, dry; Core: Copper; Rated voltage (KV): 0.4kV; Cover: PVC; Size: 2 cores, 2.5 mm ² in cross section	m	400.0		
39	Cable connection Facility	Type: indoor, terminal; Rated voltage: 3.3kV; Size: 3phase, 10 mm ²	Set	100		
40	Terminal	Size: 25mm ² ; Core: Copper	pc	100		
		Size: 20mm ² ; Core: Copper	pc	50		

Lot 2. List of materials for solar energy use

Delivery Site: UO, JR, HO, TR, AL, RA, WG, and SO

№	Materials	Technical Specification	Unit	Qty	Price	
					Unit	Total
1	Electric wire (single multicore copper wire coated with synthetic resin)	2 mm ² in cross section	m	580		
		6 mm ² in cross section	m	220		
		10 mm ² in cross section	m	410		
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 700VDC; Outer sheath color, red	m	250		
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 700VDC; Outer sheath color, black	m	250		
		30 mm ² in cross section	m	30		
		Copper wire; 50 mm ² in cross section; Rated voltage, 240VAC; enough mechanical strength for grid installation	m	2000		
		Multicore copper wire coated with different color synthetic resin; 50 mm ² in cross section; Rated voltage, 48 VDC; Outer sheath color, red	m	250		
		Multicore copper wire coated with different color	m	250		

№	Materials	Technical Specification	Unit	Qty	Price	
					Unit	Total
		synthetic resin; 50 mm ² in cross section; Rated voltage, 48 VDC; Outer sheath color, black				
2	Power cable	Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 0.6kV; Outer sheath color, black	m	200		
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 0.6kV; Outer sheath color, red	m	200		
		Multicore copper wire coated with different color synthetic resin; 20 mm ² in cross section; Rated voltage, 24 VDC; Outer sheath color, red	m	20		
		Multicore copper wire coated with different color synthetic resin; 20 mm ² in cross section; Rated voltage, 24 VDC; Outer sheath color, black	m	20		
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 36 VDC; Outer sheath color, red	m	40		
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 36VDC; Outer sheath color, black	m	40		
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 48VDC; Outer sheath color, red	m	100		
		Multicore copper wire coated with different color synthetic resin; 10 mm ² in cross section; Rated voltage, 48VDC; Outer sheath color, red	m	100		
3	Breaker	Uninterruptable maximum current 10A	pc	2		
		Uninterruptable maximum current 20A	pc	7		
		Uninterruptable maximum current 25A	pc	2		
		Uninterruptable maximum current 30A	pc	2		
		Uninterruptable maximum current 50A	pc	2		
		Uninterruptable maximum current 60A	pc	4		
4	Shunt	Rated voltage, 24VDC, Rewireable fuse or circuit breaker with uninterruptable current of 8A	pc	30		
5	Terminal	Maximum current 10A	pc	71		
		Maximum current 20A	pc	47		
		Maximum current 25A	pc	94		
		Maximum current 50A	pc	38		
		Maximum current 60A	pc	10		
6	Angle steel for frame	Galvanized steel bar, 50(H)x30(W)x3(T)mm in size, 4m in minimum length	m	865		
7	Bolt & nut for tightening	M10x50mm	set	2270		
		M12x70mm	pc	60		
		M12x100mm	pc	1390		
		M16x70mm	pc	80		
8	Anchor bolt for tightening	M12x100mm	pc	600		
9	Welding rod	4mm in diameter, for carbon steel	kg	153		
10	Cement	Portland, >27MPa	tonne	82.05		
11	Steel bar	Ø8	tonne	1.6		

№	Materials	Technical Specification	Unit	Qty	Price	
					Unit	Total
		Ø10	tonne	1.95		
		Ø12	tonne	1.07		
12	Steel plate	5mm(0.3×0.3m) in thickness	pc	1		
		Mild steel, thickness no less than 4mm;	m ²	4		
		galvanized steel, thickness 3mm;	m ²	22		
		Galvanized steel, thickness 1mm;	m ²	120		
13	Steel wire	1mm in diameter	kg	0.5		
		No less than 1.5mm in diameter	kg	40		
14	Steel pipe	32mm in diameter	m	60		
		Drawn steel; seamless steel pipe, φ50, Wall thickness, more than 4 mm, 2.0 MPa	m	120		
		Galvanized steel; φ120, Wall thickness, more than 4 mm	m	290		
15	Rectangle steel pipe	Galvanized steel, 50(H)X100(W)X5(T)mm in size, 4m in minimum length	m	520		
16	Steel pipe and fittings	Nominal outside diameter (DN): ≥ 2 inch; Wall thickness: ≥ 2.5 mm; Socket length: ≥ 20 mm; Range of working temperatures: -30 - 40 °C or better; Maximum working pressure: ≥ 10 bar; Materials of construction: Stainless steel, galvanized steel or other equivalent antirust coat steel;	m	300		
17	Sealing ring	Materials, rubber; φ50	pc	15		
18	Wooden board	12mm thickness, 250mm width, 4m in minimum length	m	158		
19	Wooden square	50 x50mm, 4m in minimum length	m	158		
20	Nail	50mm	kg	5.5		
21	Plastic Pipe	Material, PPR; φ50*6.3, 0.6 MPa	m	1500		
22	Plastic T pipe	Materials, PPR; φ50*50, 0.6 MPa	pc	5		
23	PPR 90 bend	φ50, 0.6 MPa	pc	8		
24	Insulated door	Arch tree or better wooden material made, foam plastic inside with $K \leq 0.04 \text{ W}/(\text{mK})$ and 40mm thickness, air leakage prevented with sealing, enamel painting with red orange or dark brown color	m ²	4		
25	Pipe insulation material	Foam rubber pipe section type, φ50*80, 0.034W/(mK)	m	120		
26	Ladder	Material: stainless steel, Height 2.5m, width 0.5m, rung interval 0.3m	m	1		
27	Nail	Screw type, 100mm in length	kg	30		
28	Window	Plastic, double glazed, white color, air leakage prevented with sealing	m ²	5		
29	Tile for washing room floor	Ceramic type, size 300x300mm, bright color series	m ²	40		
30	Painting material	Acrylic type, water proof property, white or light blue	kg	50		
31	Roofing material	Materials, galvanized steel; type, corrugated	m ²	25		

Lot 3. List of materials for biogas and load management

Delivery Site: JR and TS

№	Materials	Technical Specification	Unit	Qty	Price	
					Unit	Total
1	Drive pipe	Φ150x6, steel pipe, ~0.6MPa	m	4		
2	Sluice valve	Φ150, steel, ≥0.5MPa	set	1		
3	Cement	Portland, >27MPa	tonne	43.5		
4	Steel bar	φ12mm, 0.888kg/m, type: bundle of straight bar, bundle length: 9m	t	3		
		φ8mm, 0.395kg/m, type: bundle of straight bar, bundle length: 9m	t	1.3		
5	Steel pipe	GI coated, DN32 thickness: 2.6mm	m	321		
6	Steel plate	Mild iron, thickness 5mm	m ²	16.2		
7	Plastic sheet	PVC, thickness: 0.2mm	m ²	600		
8	Plastic pipe	PVC, PN6.3, thickness 7.7mm, DN250	m	12		
		PVC, PN6.3, DN75	m	110		
		PE80, PN10, SDR13.6, DN25	m	300		
		PE, flexible, φ12mm	m	300		
		PE, flexible, φ25mm	m	60		
9	Equal coupling	PE80, PN10, SDR13.6, S25-25	pc	60		
10	90°Elbow	PE80, PN10, SDR13.6, L25	pc	40		
11	Equal T connector	PE80, PN10, SDR13.6, T25	pc	6		
12	Reducing coupling	PE80, PN10, SDR13.6, 25*20	pc	20		
		PE80, PN10, SDR13.6, 20*12	pc	20		
13	Waterproof agent	get type or equivalent for air tightening concrete surface	kg	10		
14	Plastic door	height*width: 1.8*0.8m double glass, including handle and locks	pc	3		
15	Plastic rope	5-7 mm diameter, 100 m/roll	roll	10		
16	Welding rod	for mild steel, Φ4mm	kg	200		
17	Red lead	10kg/box	box	1		
18	Enamel paint	brown, 5kg/box	box	2		
19	Enamel thinner	5 liter/box	box	2		
20	Electric wire	4 cores, copper wire coated with synthetic resin, 3 mm ² in cross section	m	50		

B) Total Cost Per LOT (DAP):

LOT	Commodities as per specifications in Section 3a: Schedule of Requirements and Technical Specifications	Total Price ³
LOT 1	Lot 1. List of materials for the small hydropower plants	
Total Cost of Items		

³ In the case of discrepancies between unit price and total price, the unit price will be taken as reference basis in the evaluation.

BID total DAP to all project sites	
Estimated weight and volume (shipping dimensions)	
Estimated Shipping dimensions:	
Delivery time (Please state the offered delivery time in weeks)	
Estimated transit time	

LOT	Commodities as per specifications in Section 3a: Schedule of Requirements and Technical Specifications	Total Price⁴
LOT 2	Lot 2. List of materials for solar energy use	
	Total Cost of Items	
	BID total DAP to all project sites	
	Estimated weight and volume (shipping dimensions)	
	Estimated Shipping dimensions:	
	Delivery time (Please state the offered delivery time in weeks)	
	Estimated transit time	

LOT	Commodities as per specifications in Section 3a: Schedule of Requirements and Technical Specifications	Total Price⁵
LOT 3	Lot 3. List of materials for biogas and load management	
	Total Cost of Items	
	BID total DAP to all project sites	
	Estimated weight and volume (shipping dimensions)	
	Estimated Shipping dimensions:	
	Delivery time (Please state the offered delivery time in weeks)	
	Estimated transit time	

LOT	Commodities as per specifications in Section 3a: Schedule of Requirements and Technical Specifications	Total Price⁶
LOT 1	Lot 1. List of materials for the small hydropower plants	
	BID total DAP to all project sites	
LOT 2	Lot 2. List of materials for solar energy use	
	BID total DAP to all project sites	
LOT 3	Lot 3. List of materials for biogas and load management	
	BID total DAP to all project sites	
Grand Total		

Name of Bidder: _____

Authorised signature: _____

Name of authorised signatory: _____

Functional Title: _____

⁴ In the case of discrepancies between unit price and total price, the unit price will be taken as reference basis in the evaluation.

⁵ In the case of discrepancies between unit price and total price, the unit price will be taken as reference basis in the evaluation.

⁶ In the case of discrepancies between unit price and total price, the unit price will be taken as reference basis in the evaluation.