Energy Saving Renovation for Existing Buildings in Harbin

Heat Meters Installation and Heat Well Construction Works (Procurement Plan No. 2015-C2-Works)

BIDDING DOCUMENT

INTERNATIONAL COMPETITIVE BIDDING (ICB)

The Employer: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd

Tender Agent: Instrimpex International Tendering Company

August, 2015

Bidding Document

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INTERNATIONAL INVITATION FOR BIDDER

Bid No.: 0703-1450CIC2Y054

Name of Project: Energy Saving Renovation for Existing Buildings in Harbin

Scope of Bid: Heat Meters Installation and Heat Well Construction Works

Name of Employer: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd

Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd (hereinafter referred to as "the Borrower") has received (or applied for) a loan from the European Investment Bank – EIB (hereinafter referred to as "the Bank") – towards the cost of Works for *Energy Saving Renovation for Existing Buildings in Harbin*. This International Invitation for Bidder relates to the contract for Heat Meters Installation and Heat Well Construction.

This contract will include: Heat Meters Installation and Heat Well Construction;

This contract is expected to be implemented from September, 2015 to December, 2016

The criteria to be used in the tender evaluation are: The lowest evaluated price method;

All firms, from Eligible Sources Countries as defined in the Procurement Guidelines of European Investment Bank and also qualified for the following requirements, will be invited to participate in the tender:

- (i) shall be a independent legally registered construction corporation.
- (ii) shall have a good reputation and the performance ability for contract;
- (iii) Should have effective building construction engineering or mechanical and electrical installation works qualification above level 2 . (or equivalent qualification);
- (iv) shall have Work Safety Permit (License);
- (v) shall have a project manager who obtains the Registered Construction Qualification in House Construction level 2 or above (who shall not be designated in other projects during the same time period);
- (vi) shall submit the Heilongjiang Province Register Certification for the firm which is out of Helongjiang Province;
- (vii) shall have the perfective maintenance service system and provide fast and good maintenance services;
- (viii) The Consortium shall not be accepted in this project.

Interested eligible Bidders may obtain further information from, and inspect the Bidding Documents at:

Place: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd **Address:** No.1930 Chuangxin Road, Songbei District, Harbin, Heilongjiang Province

Time: 9:00 am to 11:00 am, 2:00pm to 4:00 pm (Beijing Time), untill September 22, 2015

Tel: +86 45188109574 or +86 1063348922(Tender Agent) Fax: +86 45188109574 or +86 1063343647(Tender Agent)

A complete set of Bidding Documents may be purchased on the submission of an application to the above address, and upon payment of a non-refundable fee of GBP 100.00 to Bank of Communications, Harbin Dongli Sub-branch, Account No. 2310007 3601801 0075702 bearing the name of the project.

On request, against a faxed copy of the evidence of the remittance, the Bidding Documents may be sent by courier service if the transport is previously ordered by the Bidder in his country. The Borrower bears no responsibility for the delivery in such a case.

A Bid Security of RMB 150,000.00 (in word: ONE HUNDRED AND FIFTY THOUSAND YUAN) fulfilling the conditions indicated in the Bidding Documents must accompany all bids.

All bids must be delivered in closed envelopes bearing the mention "Bid for Heat Meters Installation and Heat Well Construction <u>Heat Meters Installation and Heat Well Construction Works under Energy Saving Renovation for Existing Buildings in Harbin not later than AM 10:00, September 23, 2015 at the following address: <u>Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd, Address: No.1930 Chuangxin Road, Songbei District, Harbin, Heilongjiang Province, CHINA.</u></u>

Bids will be opened immediately in the presence of Bidders' representatives who choose to attend.

PART 1 – Bidding Procedures

Section I - Instructions to Bidders

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Section I - Instructions to Bidders

A. General

1. Scope of Bid

1.1 The Employer, as **indicated in the BDS**, issues this Bidding Document for the procurement of the Works as specified in Section VI (Employer's Requirements). The name, identification, and number of contracts of this bidding are **provided in the BDS**.

1.2 Throughout this Bidding Document:

- (a) the term "in writing" means communicated in written form (e.g. by mail, e-mail, fax, telex) and delivered against receipt; and
- (b) "day" means calendar day.

2. Source of Funds

2.1 The Employer intends to use the funds as defined in the BDS towards the cost of the Project defined in the BDS. The Employer intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.

3. Corrupt and Fraudulent Practices

- 3.1 Chinese anticorruption policy requires the Employer, as well as bidders, suppliers, and contractors and their agents (whether declared or not), personnel, subcontractors, sub-consultants, and service providers observe the highest standard of ethics during the procurement and execution of such contracts.
- 3.2 In pursuance of this policy, the terms and sanction actions for fraud and corruption are **detailed in the BDS**.
- 3.3 Bidders shall be aware of the provisions stated in the Clause 58.2 (h) of Section VII of the General Conditions of Contract.

4. Eligible Bidders

4.1 A Bidder may be a private entity, or state-owned entity - subject to ITB Sub-Clause 4.5 - or any combination of them in the form of a joint venture (JV), under an existing agreement, or with the intent to constitute a legally enforceable joint venture. In the case of a JV:

All parties to the JV shall be jointly and severally liable; and

(a) A JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract

execution.

- 4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality **as specified in Section V**. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, or incorporated, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services.
- 4.3 A Bidder shall not have a conflict of interest **as defined in the BDS**. All Bidders' found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if, but not limited to:
 - they have a controlling partner or controlling shareholders in common; or
 - (a) they receive or have received any direct or indirect subsidy from any of them; or
 - (b) they have the same legal representative for purposes of this bid; or
 - (c) 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, or influence the decisions of the Employer regarding this bidding process; or
 - (d) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the party is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one bid; or
 - (e) Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or
 - (f) Bidder, or any of its affiliates has been hired, or is proposed to be hired, by the Employer as Project Supervisor for the contract.

- 4.4 A Bidder that is under a declaration of ineligibility by the authorities specified in the **BDS**, at the date of the deadline for bid submission or thereafter, shall be disqualified.
- 4.5 Government-owned enterprises in China shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Employer.
- 4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employershall reasonably request.
- 4.7 In case a prequalification process has been conducted prior to the bidding process, this bidding is open only to prequalified Bidders.
- 4.8 Additional eligibility criteria of bidders specific to the contracts financed by World Bank or Asian Development Bank is specified in the BDS.

5. Eligible Materials, Equipment and Services

- 5.1 The materials, equipment and services to be supplied under the Contract shall have their origin in eligible source countries as defined in Section V, Eligible Countries, and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.
- 5.2 For purposes of ITB Clause 5.1 above, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose orutility from its components.

B. Contents of Bidding Document

6. Sections of Bidding Document

6.1 The Bidding Document consists of Parts 1, 2, and3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB Clause 8.

PART 1 Bidding Procedures

Section I - Instructions to Bidders (ITB) Section II - Bid Data Sheet (BDS) Section III - Evaluation and Qualification Criteria

Section IV - Bidding Forms

Section V - Eligible Countries

PART 2 Requirements

Section VI – Employer's Requirements

PART 3 Contract

Section VII - General Conditions of Contract (GCC)

Section VIII - Particular Conditions of Contract (PCC)

Section IX - Contract Forms

- 6.2 The Invitation for Bids issued by the Employer is not part of the Bidding Document.
- 6.3 The Employer is not responsible for the completeness of the Bidding Document and their Addenda, if they were not obtained directly from the Employer.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.
- 7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting
- 7.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer's address **indicated in the BDS** or raise his inquiries during the pre-bid meeting if provided for in accordance with ITB Sub-Clause 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of bids, within a period **given in the BDS**. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB Sub-Clause 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 22.2.
- 7.2 The Bidder is encouraged to visit and examine the Site of Works and its surroundings and obtain for itself, on its own risk and responsibility, all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.
- 7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the

Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

7.4 The Bidder's designated representative is invited to attend a prebid meeting, if **provided for in the BDS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

7.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Employer not later than one week before the meeting.

7.6 Minutes of the pre-bid meeting, including the text of the questions rose, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with Sub-Clause 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB Clause 8 and not through the minutes of the pre-bid meeting.

7.7 Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Document

- 8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing addendum.
- 8.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer.
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB Sub-Clause 22.2

C. Preparation of Bids

9. Cost of Bidding

9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10. Language of Bid

10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in English (for the international bidders)/Chinese (for the local bidders). Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in Chinese, in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. Documents Comprising the Bid

- 11.1 The Bid shall comprise the following:
 - Letter of Bid;
 - completed Schedules, in accordance with ITB Clauses 12 and 14, or as stipulated in the BDS;
 - Bid Security, in accordance with ITB Clause 19;
 - alternative bids, if permitted, in accordance with ITB Clause 13;
 - Documentary evidence in accordance with ITB Clause 4 and Clause 5 establishing the Bidder's eligibility to bid;
 - written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Sub-Clause 20.2;
 - documentary evidence in accordance with ITB Clause 17 establishing the Bidder's qualifications to perform the contract;
 - technical Proposal in accordance with ITB Clause 16;
 - in the case of a bid submitted by a joint venture (JV), the JV agreement, or letter of intent to enter into a JV including a draft agreement, indicating at least the parts of the Works to be executed by the respective partners and duly signed; and
 - covenant integrity stipulated in Section IV. for Bidding Forms
 - any other document required in the BDS.

12. Letter of Bid and Schedules

12.1 The Letter of Bid and Schedules shall be prepared using the relevant forms in Section IV(Bidding Forms), if so provided. The forms shall be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

13.1 Unless otherwise **indicated in the BDS**, alternative bids shall

not be considered.

- 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be **included in the BDS**, as will the method of evaluating different times for completion.
- 13.3 Pursuant to ITB Sub-Clause 13.1, and subject to ITB Sub-Clause 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding Document shall first price the Employer's design as described in the Bidding Document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer.
- 13.4 When specified in the BDS, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be **identified in the BDS** and described in Section VI(Employer's Requirements). The method for their evaluation will be stipulated in Section III(Evaluation and Qualification Criteria).

14. Bid Prices and Discounts

- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall conform to the requirements specified below.
- 14.2 The Bidder shall submit a bid for the whole of the works described in ITB Sub-Clause 1.1 by filling in prices for all items of the Works, as identified in Section IV (Bidding Forms). In case of admeasurement contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities.
- 14.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered.
- 14.4 Unconditional discounts, if any, and the methodology for their application shall be quoted in the Letter of Bid, in accordance with ITB Sub-Clause 12.1.
- 14.5 If so indicated in ITB Sub-Clause 1.1, bids are invited for

individual contracts or for any combination of contracts (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB Sub-Clause 14.4, provided the bids for all contracts are submitted and opened at the same time.

14.6 Unless otherwise **provided in the BDS** and the Conditions of Contract, the prices quoted by the Bidder shall be fixed. If the prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data in Section IV (Bidding Forms) and the Employer may require the Bidder to justify its proposed indices and weightings.

14.7 All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date twenty-eight (28) days prior to the deadline for submission of bids, shall be included in the rates and prices and the total bid price submitted by the Bidder.

15. Currency of Bid

15.1 Prices shall be quoted in Chinese Currency (RMB).

16. Documents Comprising the Technical Proposal

16.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, time-bonded schedule and any other information as stipulated in Section IV (Bidding Forms), in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the work requirements and the completion time.

17. Documents Establishing the Qualifications of the Bidder

17.1 To establish its qualifications to perform the Contract in accordance with Section III (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding information sheets included in Section IV(Bidding Forms).

18. Period of Validity of Bids

18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Employer. A bid valid for a shorter period shall be rejected by the Employer as nonresponsive.

- 18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Employer may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB Sub-Clause 18.3.
- 18.3 In the case of fixed price contracts, if the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be adjusted by a factor specified in the request for extension. Bid evaluation shall be based on the Bid Price without taking into consideration the above correction.

19. Bid Security

- 19.1 The Bidder shall furnish as part of its bid, in original form of a Bid Security and the amount shall be **specified in the BDS** and denominated in Chinese Currency (RMB).
- 19.2 The bid security shall be, at the Bidder's option, in any of the following forms:
 - an unconditional guarantee, issued by a reputable bank in China;
 or
 - a cashier's or certified check.

In the case of a bank guarantee, the bid security shall be submitted using the Bid Security Form included in Section IV(Bidding Forms). The bid security shall be valid for twenty-eight days (28) beyond the original validity period of the bid, or beyond any period of extension if requested under ITB Sub-Clause 18.2.

- 19.3 Any bid not accompanied by an enforceable and substantially compliant bid security shall be rejected by the Employer as non-responsive.
- 19.4 The bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the Performance Security pursuant to ITB Sub-Clause 39.
- 19.5 The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security.
- 19.6 The bid security may be forfeited:

- if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, except as provided in ITB Sub-Clause 18.2 or
- if the successful Bidder fails to:
 - sign the Contract in accordance with ITB Clause38; or
 - furnish a performance security in accordance with ITB Clause39.
- 19.7 The Bid Security of a JV shall be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent mentioned in Item 7, of Bidder Information Form in Section IV, Bidding Forms.

20. Format and Signing of Bid

- 20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB Clause 11 and clearly mark it "ORIGINAL". Alternative bids, if permitted in accordance with ITB Clause 13, shall be clearly marked "ALTERNATIVE". In addition, the Bidder shall submit copies of the bid in the number **specified in the BDS**, and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as **specified in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature.
- 20.3 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

D. Submission and Opening of Bids

21. Submission, Sealing and Marking of Bids

- 21.1 Bidders may always submit their bids by mail or by hand. When so **specified in the BDS**, bidders shall have the option of submitting their bids electronically. Procedures for submission, sealing and marking are as follows:
 - (a) Bidders submitting bids by mail or by hand shall enclose the original and each copy of the Bid, including alternative bids, if

permitted in accordance with ITB Clause 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB Sub-Clauses 21.2 and 21.3.

- (b) Bidders submitting bids electronically shall follow the electronic bid submission procedures **specified in the BDS**.
- 21.2 The inner and outer envelopes shall:
 - (a) bear the name and address of the Bidder;
 - (b) be addressed to the Employer as provided in the BDS pursuant to ITB Sub-Clause 22.1;
 - (c) bear the specific identification of this bidding process indicated in accordance with ITB Sub-Clause 1.11 and any additional identification marks as specified in the BDS; and
 - (d) bear a warning not to open before the time and date for bid opening, in accordance with ITB Sub-Clause 25.1.
- 21.3 If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the bid.

22. Deadline for Submission of Bids

- 22.1 Bids shall be received by the Employer at the address and no later than the date and time **indicated in the BDS**.
- 22.2 The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with ITB Clause 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

23.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB Clause 22. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of

24.1 A Bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice in accordance with ITB Clause 21, duly signed by an authorized representative, and shall include a copy of the authorization (the Power of Attorney) in

Bids

accordance with ITB Sub-Clause 20.2, (except that no copies of the withdrawal notices are required). The corresponding substitution or modification of the bid shall accompany the respective written notice. All notices shall be:

- (a) prepared and submitted in accordance with ITB Clause 20 and ITB Clause 21, and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION." and
- (b) received by the Employer prior to the deadline prescribed for submission of bids, in accordance with ITB Clause 22.
- 24.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 24.1 shall be returned unopened to the Bidders.
- 24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25. Bid Opening

- 25.1 The Employer shall open the bids in public at the address, date and time **specified in the BDS**. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB Sub-Clause 21.1, shall be as **specified in the BDS**.
- First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. If the withdrawal envelope does not contain a copy of the "Power of Attorney" confirming the signature as a person duly authorized to sign on behalf of the Bidder, the corresponding bid will be opened. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "Substitution" shall be opened, read out and recorded and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out and recorded at bid opening. Envelopes marked "Modification" shall be opened, read out and recorded with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out and recorded at Bid opening. Only envelopes that are opened, read out

and recorded at Bid opening shall be considered further..

25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the Bid Prices, including any discounts and alternative offers; the presence of a Bid Security, if required; and any other details as the Employer may consider appropriate. Only discounts and alternative offers read out and recorded at Bid opening shall be considered for evaluation. No Bid shall be rejected at Bid opening except for late bids, in accordance with ITB Sub-Clause 23.1.

25.4 The Employer shall prepare a record of the Bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot if applicable, including any discounts, and alternative offers if they were permitted; and the presence or absence of a Bid Security, if one was required. The Bidders' representatives who are present shall be requested to sign the record. Omission of a bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

26. Confidentiality

26.1 Information relating to the examination, evaluation, comparison, and qualification of bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on Contract award has been announced.

26.2 Any effort by a Bidder to influence the Employer in the evaluation of the bids or Contract award decisions may result in the rejection of its bid.

26.3 Notwithstanding ITB Sub-Clause 26.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it should do so in writing.

27. Clarification of Bids

27.1 To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder in respect to its bid and that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change in the prices or substance of the bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors

discovered by the Employer in the evaluation of the bids, in accordance with ITB Clause 31.

27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Employer's request for clarification, its bid may be rejected.

28. Deviations, Reservations, and Omissions

- 28.1 During the evaluation of bids, the following definitions apply:
 - (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

29. Determination of Responsiveness

- 29.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB Clause 11.
- 29.2 A substantially responsive bid is one that conforms to all terms, conditions, and specifications of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
 - (a) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
 - (b) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract; or
 - (c) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.
- 29.3 The Employer shall examine the technical aspects of the bid submitted in accordance with ITB Clause 16, Technical Proposal, in particular, to confirm that all requirements of Section VI (Employer's Requirements) have been met without any material deviation, reservation or omission.
- 29.4 If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material

deviation, reservation, or omission.

30. Nonconformitie s, Errors, and Omissions

30.1 Provided that a bid is substantially responsive, the Employer may waive any non-conformities or omissions in the Bid that do not constitute a material deviation, reservation or omission.

30.2 Provided that a bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities 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.

30.3 Provided that a bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities or omissions related to the Bid Price. To this effect, the Bid Price may be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The adjustment shall be made using the methods indicated in Section III (Evaluation and Qualification Criteria).

31. Correction of Arithmetical Errors

- 31.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:
 - (a) only for admeasurement contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
 - (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 31.2 If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be rejected.

32. Evaluation of Bids

- 32.1 The Employer shall use the criteria and methodologies listed in this clause. No other evaluation criteria or methodologies shall be permitted.
- 32.2 To evaluate a bid, the Employer shall consider the following:
 - (a) the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities for admeasurement contracts or Activity Schedule for lump sum contracts, but including Day Work items, where priced competitively;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB Sub-Clause 31.1;
 - (c) price adjustment due to discounts offered in accordance with ITB Sub-Clause 14.4;
 - (d) adjustment for nonconformities in accordance with ITB Sub-Clause 30.3;
 - (e) application of all the evaluation factors indicated in Section III (Evaluation and Qualification Criteria);
- 32.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 32.4 If this Bidding Document allows Bidders to quote separate prices for different contracts, and to award multiple contracts to a single Bidder, the methodology to determine the lowest evaluated price of the contract combinations, including any discounts offered in the Letter of Bid, is specified in Section III (Evaluation and Qualification Criteria).
- 32.5 If the bid for an admeasurement contract, which result in the lowest Evaluated Bid Price, is seriously unbalanced, front loaded or substantially below updated estimates in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in

the event of default of the successful Bidder under the Contract.

33. Comparison of Bids

33.1 The Employer shall compare all substantially responsive bids in accordance with ITB Sub-Clause 32.2 to determine the lowest evaluated bid.

34. Qualification of the Bidder

34.1 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid meets the qualifying criteria specified in Section III (Evaluation and Qualification Criteria).

34.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Sub-Clause 17.1.

34.3 An affirmative determination of qualification shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Employer shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.

34.4 The capabilities of the manufacturers and subcontractors proposed in its Bid to be used by the lowest evaluated Bidder for identified major items of the Requirements will also be evaluated for acceptability in accordance with the criteria and methodologies defined in Section III, Evaluation and Qualification Criteria. Their participation should be confirmed with a letter of intent between the parties, as needed. Should a manufacturer or subcontractor be determined to be unacceptable, the Bid will not be rejected, but the Bidder will be required to substitute an acceptable manufacturer or subcontractor without any change to the bid price.

35. Employer's Right to Accept Any Bid, and to Reject Any or All Bids

35.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

F. Award of Contract

36. Award Criteria

36.1 Subject to ITB Sub-Clause 35.1, the Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be

qualified to perform the Contract satisfactorily.

37. Notification of Award

37.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, via the Letter of Acceptance included in the Contract Forms, that its bid has been accepted. At the same time, the Employer shall also notify all other Bidders of the results of the bidding.

37.2 The Employer shall publish in a newspaper of wide circulation or a freely accessible website the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid, (ii) bid prices as read out at Bid Opening, (iii) name and evaluated prices of each Bid that was evaluated, (iv) name of bidders whose bids were rejected and the reasons for their rejection, and (v) name of the winning Bidder, and the Price it offered, as well as the duration and summary of the scope of the contract awarded.

37.3 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.

37.4 The Employer shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB Sub-Clause 37.1, requests in writing the grounds on which its bid was not selected.

38. Signing of Contract

38.1 Promptly upon notification, the Employer shall send the successful Bidder the Contract Agreement.

38.2 Upon the notification of award, within fourteen (14) days, the Employer will either:

- a) send the successful bidder the Contract signed by the Employer, which will incorporate all agreements between the Employer and the successful bidder. In such a case, within fourteen (14) days upon the receipt of said Contract, the successful bidder shall sign the Contract and deliver the same to the Employer; or
- b) invite the successful bidder to finalize and sign the Contract at the location stated in that invitation.

39. Performance Security

39.1 Within twenty-eight (28) days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, subject to ITB Sub-Clause 32.5, using for that purpose the Performance Security Form included in Section VIII (Contract Forms), or another form acceptable to the Employer.

39.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.

40. Adjudicator

40.1 The Employer proposes the person **named in the BDS** to be appointed as Adjudicator under the Contract, at the hourly fee **specified in the BDS**, plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in his Bid. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in the Particular Conditions of Contract (PCC) pursuant to Sub-Clause 24.1 of the General Conditions of Contract (GCC), to appoint the Adjudicator.

Section II - Bid Data Sheet (BDS)

A. Introduction

ITB 1.1	The Employer is: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd.				
ITB 1.1	The identification number of the bidding process is: 0703-1450CIC2Y054 Name of Project: Energy Saving Renovation for Existing Buildings in Harbin Scope of Bid: Heat Meters Installation and Heat Well Construction Works				
ITB 2.1	Source of funds: European Investment Bank Name of Project: Energy Saving Renovation for Existing Buildings in Harbin Scope of Bid: Heat Meters Installation and Heat Well Construction Works				
ITB 2	2.2 Payments by the European Investment Bank will be made only at the request of the Borrower and upon approval by the European Investment Bank in accordance with the terms and conditions of the financing agreement between the Borrower and the Bank (hereinafter called the Loan Agreement), and will be subject in all respects to the terms and conditions of that Loan Agreement. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the funds.				

ITB 3.2 In pursuance of this policy, the European Investment Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) "collusive practice" is an arrangement between two or more parties1 designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - (iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party
- (b) will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the European Investment Bank to address such practices when they occur; and
- (d) will sanction a firm or an individual, at any time, in accordance with European Investment Bank 's Anticorruption Policy and Integrity Principles and Guidelines (both as amended from time to time), including declaring ineligible, either indefinitely or for a stated period of time, to participate in European Investment Bank financed or European Investment Bank-administered activities or to benefit financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive or other prohibited practices.

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European Investment Bank considers a conflict of interest to be a situation in ITB 4.3 which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such conflict of interest may contribute to or constitute a prohibited practice under European Investment Bank's Anticorruption Policy. In pursuance of European Investment Bank's Anticorruption Policy's requirement that Borrowers (including beneficiaries of Bank-financed activity), as well as bidders, suppliers, and contractors under Bank-financed contracts, observe the highest standard of ethics. EIB will take appropriate actions, which include not financing of the contract, if it determines that a conflict of interest has flawed the integrity of any procurement process A bidder that is under a declaration of ineligibility by European Investment Bank **ITB 4.4** shall be disqualified. 4.8 Firms shall be excluded if **ITB 4.8** (a) as a matter of law or official regulation, China prohibits commercial relations with that country, provided that the European Investment Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or related services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, China prohibits any import of goods or contracting of works or services from that country or any payments to persons or entities in that country.

B. Bidding Documents

ITB 7.1	For <u>clarification purposes</u> only, the Employer's address is:			
	Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd.			
	Street Address: No.1930 Chuangxin Road, Songbei District in Harbin City			
	Telephone: + 86 451 8810 9574			
	Facsimile number: +86 451 8810 9574			
	Electronic mail address: shaqiyu@163.com			
	Requests for clarification should be received by the Employer no later than: 10 Days before the tender opening date			

ITB 7.4	A site visit and the meeting before the bidding conducted by the	l				
	Employer shall not be organized.					

C. Preparation of Bids

ITB 11.1 (b)	The following schedules shall be submitted with the bid: price Bill of Quantities in Measure Contract and/or price single construction price list.				
ITB 11.1 (i)	The Bidder shall submit with its bid the following additional documents:				
	Local Bidders:				
	1. shall submit the copy of its Business License (the original is required for verification).				
	2. shall submit the effective Building Construction Engineering or mechanical and electrical installation works qualification above level 2 (the original is required for verification).				
	3. shall submit the effective Work Safety License by Construction Administrative Department. (the original is required for verification)				
	Bidders from abroad:				
	1. shall submit its pertinent certificate registered in local business according to the law (the consular authentication of the above mentioned document is required in the bid);				
	2. shall submit the equivalent international qualification in the same level to the effective "Building Construction Engineering or mechanical and electrical installation works qualification above level 2" (the consular authentication of the above mentioned document is required in the bid)				
	3. shall submit the equivalent international qualification in the same level to the effective "Work Safety License by Construction Administrative Department" (the consular authentication of the above mentioned document is required in the bid)				
ITB 13.1	Alternative bids shall not be permitted.				
ITB 13.2	Alternative times for completion <i>shall not be</i> permitted.				
ITB 13.4	Alternative technical solutions <i>shall not be</i> permitted				

ITB 14.6	The prices quoted by the Bidder shall not be subject to adjustment during the performance of the Contract.		
ITB 18.1	The bid validity period shall be: 90 days after the date of bid opening		
ITB 19.1	The Bidder shall furnish a bid security in the amount of RMB 150,000.00		
ITB 20.1	In addition to the original of the bid, the number of copies is: Four (4) copies		
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall indicate: The name and description of the documentation required to demonstrate the authority of the signatory to sign the Bid such as a Power of Attorney; and/or The Consortium agreement signed by the members shall be accompanied with the bid submitted by the consortium that has established or will be established.		

D. Submission and Opening of Bids

ITB 21.1	Bidders <i>shall not</i> have the option of submitting their bids electronically. All the electronic data shall be stored in a USB flash disk, and should be submitted <i>two (2) sets with the formal bid.</i>					
ITB 21.1 (b)	Bidders shall not have the option of submitting their bids electronically. The electronic bidding submission shall be <i>rejected</i> .					
ITB 21.2 (c)	The inner and outer envelopes shall bear the following additional identification marks:					
	Attention: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd.					
	Street Address: No.1930 Chuangxin Road, Songbei District in Harbin City					
	Name of Project: Energy Saving Renovation for Existing Buildings in Harbin Scope of Bid: Heat Meters Installation and Heat Well Construction Works					

	It is not allowed to open before the deadline for bid submission				
ITB 22.1	For bid submission purposes only, the Employer's address is:				
	Attention: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd.				
	Street Address: No.1930 Chuangxin Road, Songbei District in Harbin City				
	City: Harbin city ,Helongjiang Province				
	Date: September, 23, 2015				
	Time: a.m. 10:00				
ITB 25.1	The bid opening shall take place at:				
	Attention: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd.				
	Street Address: Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd.				
	City: Harbin city , Helongjiang Province				
	Time: 10:00 am, September 23,2015				

E. Evaluation and Comparison of Bids

ITB 40.1	The Adjudicator proposed by the Employer is not required.
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Section III - Evaluation and Qualification Criteria

This section contains all the criteria that the Employer shall use to evaluate bids and qualify Bidders if the bidding was not preceded by a prequalification exercise and post qualification is applied. In accordance with ITB Clause 32 and ITB Clause 34, no other methods, criteria and factors shall be used. The Bidder shall provide all the information requested in the forms included in Section IV (Bidding Forms).

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1. Evaluation

In addition to the criteria listed in ITB Sub-Clause 32.2 (a) - (e) the following criteria shall apply:

1.1 Adequacy of Technical Proposal

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VI (Employer's Requirements).

1.2 Multiple Contracts

Pursuant to Sub-Clause 32.4 of the Instructions to Bidders, If the worksare grouped in multiple contracts and a bidder submits several successful (lowest evaluated substantially responsive) bids, the evaluation will include an assessment of the Bidder's capacity to meet the combined requirements regarding:

- Financial Situation
- Experience
- Current contract commitments
- Cash flow capacity
- Equipment to be allocated
- Personnel to be fielded

1.3 Completion Time

Any proposal of alternative completion time from bidders will not be accepted.

1.4 Technical Alternatives

Any proposal of technical alternatives from bidders will not be accepted.

2. Qualification

Factor	2.1 Eligibility						
_		Bidder				Documentation	
Sub-Factor	Requirement	Single Entity	Joint Venture (N/A)			Required	
			All partners combined	Each partner	At least one partner		
2.1.1 Nationality	Nationality in accordance with ITB Sub-Clause 4.2.	Must meet requirement	/	/	/	Form ELI –1.1 and 1.2, with attachments	
2.1.2 Conflict of Interest	No conflicts of interests as described in ITB Sub-Clause 4.3.	Must meet requirement	/	/	/	Letter of Bid	
2.1.3 Ineligibility	Not having been declared ineligible in accordance with ITB Sub-Clause 4.4.	Must meet requirement	/	/	/	Letter of Bid	
2.1.4 Government Owned Entity	Compliance with conditions of ITB Sub-Clause 4.5	Must meet requirement	/	/	/	Form ELI -1.1 and 1.2, with attachments	
2.1.5 Ineligibility based on Chinese Law	Not having been excluded as a result of the Chinese laws or official regulations	Must meet requirement	/	/	/	Letter of Bid	

Factor	2.1 Eligibility						
	Criteria						
Cub Fastan		Bidder				Documentation	
Sub-Factor	Requirement	Single Entity	Joint Venture (N/A)			Required	
			All partners combined	Each partner	At least one partner	· 	
2.1.6 Qualification Certificates	1) Domestic bidders must have effective Building Construction Engineering or mechanical and electrical installation works qualification above level 2issued by the administrative departments. 2) Domestic project manager of the biddersshould hold 2nd class or above registered construction engineer qualifications. Safety personnel, quality inspector, cost engineer, material engineer should hold valid certificates. 3) Domestic bidders must have valid safeconstruction license issued by the administrative department. Foreign bidders should have the equal eligibility criteria.	Must meet requirement	N/A	N/A	N/A	3:	

Factor	2.2 Historical Contract No	n-Performance				
		Cri	iteria			
Sub-Factor			Bidder			Documentation
	Requirement	Joint Venture			Required	
	-	Single Entity	All partners combined	Each partner	At least one partner	
2.2.1 History of non- performing contracts	Non-performance of a contract did not occur within the last FIVE (5) years prior to the deadline for bid submission, based on all information on fully settled disputes or litigation. A fully settled dispute or litigation is one 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.	Must meet requirement by itself or as partner to past or existing JV	N / A	Must meet requirement by itself or as partner to past or existing JV	N/A	Form CON - 2

Factor	2.2 Historical Contract Non-Performance						
		Criteria					
Sub-Factor		Documentation					
	Requirement	Requirement Single Entity	Joint Venture			Required	
			All partners combined	Each partner	At least one partner		
2.2.2 Pending Litigation	All pending litigation shall in total not represent more than 50% of the Bidder's net worth and shall be treated as resolved against the Bidder. The net assets (calculated by the difference between the total assets and total liabilities) should be positive.	Must meet requirement by itself or as partner to past or existing JV	N/A	Must meet requirement by itself or as partner to past or existing JV	N / A	Form CON – 2	

Factor	2.3 Financial Situation					
	Criteria					
C li Farta		Bidder			Documentation Required	
Sub-Factor	Requirement	Joint Venture				
	Requirement	Single Entity	All partners combined	Each partner	At least one partner	
2.3.1 Historical Financial Performance	Submission of audited balance sheets or if not required by the law of the bidder's country, other financial statements acceptable to the Employer, for the last <i>THREE [3] years</i> to demonstrate the current soundness of the bidders financial position and its prospective long term profitability. As a minimum, a Bidder's net worth calculated as the difference between total assets and total liabilities should be positive.	Must meet requirement	N/A	Must meet requirement	N/A	Form FIN – 3.1 with attachments
2.3.2. Average Annual Turnover	Minimum average annual turnover of <i>RMB 4 million</i> , calculated as total certified payments received for contracts in progress or completed, within the last <i>THREE (3) years</i>	Must meet requirement	Must meet requirement	Must meet no less than twenty five percent (25%) of the requirement	Must meet at least forty five percent (45%) of the requirement	Form FIN –3.2

Factor	2.3 Financial Situation					
		Crit	eria			
			Bid	Documentation		
Sub-Factor	Requirement			Joint Venture		Required
	.,	Single Entity	All partners combined	Each partner	At least one partner	
2.3.3. Financial Resources	The Bidder shall demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet: (i) the following cash-flow requirement of <i>RMB 2</i> million and (ii) the overall cash flow requirements for this contract and its concurrent commitments.	Must meet requirement	Must meet requirement	Must meet no less than twenty five percent (25%) of the requirement	Must meet at least forty five percent (45%) of the requirement	Form FIN –3.3

Factor	2.4 Experience					
		Bidder			Documentation	
Sub-Factor		Joint Venture				
	Requirement	Single Entity	All partners combined	Each partner	At least one partner	Required
2.4.1 General Experience	At least ONE (1) contract with a total price of at least RMB 1 million in theHeat Meters Installation and Heat Well Construction Project(s) as contractor, subcontractor, or management contractor for at least the last THREE [3] years prior to the applications submission deadline. The document of Letter of Acceptance or the contract shall be needed as the reference to the above required performance.	Must meet requirement	N/A	Must meet requiremen t corresponding to the assignment as given in existing or to be signed Joint Venture Agreement	N/A	Form EXP-4.1

2.5 Personnel

The Bidder shall demonstrate that it will have the personnel for the key positions that meet the following requirements:

No.	Position	Total Work Similar Experience (years)	In Similar Works Experience (years)
1			
2			
3			
4			
5			

The Bidder shall provide details of the proposed personnel and their experience records in the relevant Forms included in Section IV, Bidding Forms.

2.6 Equipment

The Bidder shall demonstrate that it will have access to the key Contractor's equipment listed hereafter:

No.	Equipment Type and Characteristics	Minimum Number required
1		
2		
3		
4		
5		

Note: The requirement on the Contractor's Equipment should be limited to the key equipment required to execute the Contract, e.g. to ensure the quality or timely complete the works.

The Bidder shall provide further details of proposed items of equipment using the relevant Form in Section IV.

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Letter of Bid

The Bidder shall prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

Date:
To:
We, the undersigned, declare that:
 We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 8;
We offer to execute in conformity with the Bidding Documents the following Works:
The total price of our Bid, excluding any discounts offered in item (d) below is:;
■ The discounts offered and the methodology for their application are:
Our bid shall be valid for a period of [insert validity period as specified in ITB Sub-Clause 18.1.] days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
 If price adjustment provisions apply, the Table(s) of Adjustment Data shall be considered part of this Bid;²
 If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document;

² Include if price adjustment provisions apply in the Contract in accordance with PCC Sub-Clause 45.1 Adjustments for Changes in Cost.

- Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries;
- We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB Sub-Clause 4.4;
- We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB Sub-Clause 4.4, other than alternative offers submitted in accordance with ITB Sub-Clause 13;
- Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible by (select the World Bank or Asian Development Bank or relevant Chinese Authorities) (for World Bank or Asian Development Bank financed contracts add "or by an act of compliance with a decision of the United Nations Security Council");
- We are not a state-owned entity / We are a state-owned entity but meet the requirements of ITB Sub-Clause 4.6;³
- We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract:⁴

Name of Recipient	Address	Reason	Amount

- We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive; and
- If awarded the contract, the person named below shall act as Contractor's Representative:
- We agree to permit *EIB or Chinese authorities* or its representative to inspect our account and records and other documents relating to the bid submission and to have them audited by auditors appointed by *EIB or Chinese authorities*.

Name:

³Use one of the two options as appropriate.

⁴If none has been paid or is to be paid, indicate "none".

In the capacity of:	
Signed:	
Duly authorized to sign the Bid for and on behalf of:	
Official Seal:	
Date:	

Schedules

Bill of Quantities / Activity Schedules

For more details, please refer to Section VI Employer's Requirements

Form of Bid Security (Bank Guarantee)

(The Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated and issue in the Bank's official letterhead.)

(Bank's Nar	ne, and Address of Issuing Branch or Office)
Beneficiary	: (Employer's Name and Address)
Date:	
BID GUARA	NTEE No.:
(hereinafte the execution The guarantees	ntee is hereby issued to serve as a Bid Security of (insert Bidder's name or called "the Bidder") for Invitation for Bids (IFB) No (insert number of IFB) for on of (insert description of the Works) to (insert Employer's name) (insert the name of the issuing Bank) hereby unconditionally and irrevocably and binds itself, its successors and assigns to pay you immediately without recourse, the sum of (insert the amount in Chinese Currency (RMB) upon receipt of your written notification of the following:
(a)	The Bidder has withdrawn its Bid during the period of bid validity specified by the Bidder in Bid Submission Form; or
(b)	The Bidder has been notified of the acceptance of its Bid by the Employer during the period of Bid validity: (i) fails or refuses to execute the Contract Agreement or (ii) fails or refuses to furnish the Performance Security, if required, in accordance with the Instructions to Bidders.
copies of upon the the earlie	antee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of the contract signed by the Bidder and the performance security issued to you instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, uponer of (i) our receipt of a copy your notification to the Bidder of the name of the I Bidder; or (ii) twenty-eight days after the expiration of the Bidder's bid.
Conseque	ently, any demand for payment under this guarantee must be received by us at the
office on	or before that date.
(insert na	me of Issuing Bank)
Ву	
(Printed n	name and signature of official authorized to sign on behalf of Issuing bank)

Official Seal: _____

Technical Proposal

Technical Proposal Forms

Personnel
Equipment
Site Organization
Method Statement
Mobilization Schedule
Construction Schedule
Others

Forms for Personnel

Form PER – 1: Proposed Personnel

Bidders should provide the names of suitably qualified personnel to meet the specified requirements for each of the positions listed in Section III (Evaluation and Qualification Criteria). The data on their experience should be supplied using the Form below for each candidate.

1.	Title of position
	Name
2.	Title of position
	Name
3.	Title of position
	Name
4.	Title of position
	Name
5.	Title of position
	Name
6.	Title of position
	Name
etc.	Title of position
	Name

Form PER – 2: Resume of Proposed Personnel

The Bidder shall provide all the information requested below. Fields with asterix (*) shall be used for evaluation.

Name *	Date of birth		
Professional qualifications			
Name of Employer			
Address of Employer			
Telephone	Contact (manager / personnel officer)		
Fax	E-mail		
Job title	Years with present Employer		
	Professional qualifications Name of Employer Address of Employer Telephone Fax		

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

From*	To*	Company, Project , Position, and Relevant Technical and Management Experience*

Forms for Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III (Evaluation and Qualification Criteria). A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder. The Bidder shall provide all the information requested below, to the extent possible. Fields with asterisk (*) shall be used for evaluation.

Type of Equip	oment*			
Equipment Information	Name of manufacturer		Model and power rating	
	Capacity*	,	Year of manufacture*	
Current Status	Current location			
	Details of current commitments	s		
Source	Indicate source of the equipme	nt		
	错误! 未找到引用源。	Owned	错误! 未找到引用源。	Rented
	错误! 未找到引用源。	Leased	错误! 未找到引用源。 \$	Specially
	manufactured			

The following information shall be provided only for equipment not owned by the Bidder.

Employer	Name of Employer		
	Address of Employer		
	Telephone	Contact name and title	
	Fax	Telex	
Agreements	Details of rental / lease / manufacture	agreements specific to the project	

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section III (Evaluation and Qualification Criteria), the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder

Form ELI 1.1

Bidder Information Sheet

	Date:
	Bidding No.:
	Invitation for Bid No.:
	Page of pages
1. Bidder's Legal Name	
2. In case of JV, legal name of each party:	
3. Bidder's Country of Registration:	
4. Bidder's Year of Registration:	
5. Bidder's Legal Address in Country of Registration:	
6. Bidder's Authorized Representative Information	
Name:	
Address:	
Telephone/Fax numbers:	
Email Address:	
7. Attached are copies of original documents of: Articles of Incorporation or Registration of firm nam	and in 1 above in accordance with ITP
Sub-Clauses 4.2 and 4.3.	ied iii 1, above, iii accordance with 11B
 In case of JV, letter of intent to form J 	IV including a draft agreement or IV
agreement, in accordance with ITB Sub-Clauses	
 In case of the state-owned entity, docu 	
autonomy and compliance with the principles	
ITB Sub-Clause 4.6.	·

Form ELI 1.2 Party to JV Information Sheet

	Date:		
	Bidding No.	:	
	Invitation fo	or Bid No.:	
	Page	of	pages
1. Bidder's Legal Name:			
2. Authorization to represent the firm (Bidder) named	d above, in ac	ccordance wi	th ITB 20.2:
3. JV's party legal name:			
4. JV's party Country of Registration:			
5. JV's party Year of Registration:			
6. JV's party Legal Address in Country of Registration:	:		
7. JV's the Employer authorized Representative Inform	mation		
Name:			
Address:			
Telephone/Fax numbers:			
Email Address:			
8. Attached are copies of original documents of:			
□ Articles of Incorporation or Registration of firm name Sub-Clauses 4.2 and 4.3.	ed in 1, abov	e, in accorda	ince with ITB
☐ In case of state-owned entity, documents establish compliance with the principles of commercial law, i			•

Form CON – 1

Historical Contract Non-Performance

Bidder's Legal Name: Date:				
JV Partner Legal Name:				
Bidding No.:				
		Bidding No.: c	of pages	
			Ī	
Non-Perf	orming Contracts	s in accordance with (Evaluation and Qualification C	riteria)	
Contra	act non-performa	ance did not occur during the stipulated period, in	accordance with	
Sub-Fa	actor 2.2.1 of Sec	tion III (Evaluation and QualificationCriteria)		
Contra	act non-performa	ance during the stipulated period, in accordance	with Sub-Factor	
2.2.1	of Section III(Evalu	uation and Qualification Criteria).		
Year	Non-		Total Contract	
	performed	Contract Identification	Amount (current value,	
	Value as		US\$ equivalent)	
	Percent of			
	Total Assets			
		Contract Identification:		
		Name of Employer:		
		Address of Employer:		
		Matter in dispute:		
		Contractiblentification:		
		NhameeoffEmployer:		
		AddithesssoffEmphayer:		
		Watterindispute:		
		Contract Identification:		
		Name of Employer:		
		Address of Employer:		
		Matter in dispute:		
		To be added as needed.		

Form CON – 2

Historical Pending Litigations

JV Partiler Legal Name.	Bidding No.:	
	Page	of pages
Pending Litigation, in acc	cordance with Section III (Evaluation and Qualification	n Criteria)
	n accordance with Sub-Factor 2.2.2 of Section III	(Evaluation and
QualificationCriteria)		
Pending litigation in	accordance with Sub-Factor 2.2.2 of Section III	I(Evaluation and
QualificationCriteria), as	indicated below	
Year Disputed Value		Total Contract
as Percent of Total Assets	Contract Identification	Amount (current value,
Total Assets		US\$ equivalent)
	Contract Identification:	, ,
	Name of Employer:	
	Address of Employer:	
	Matter in dispute:	
	Contract Identification:	
	Name of Employer:	
	Address of Employer:	
	Matter in dispute:	
	To be added as needed.	

Form CCC

Current Contract Commitments / Works in Progress

Bidders and each partner to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Name of contract	Employer,		Estimated	Average monthly
	contact	outstanding	completion date	invoicing over
	address/tel/fax	work (current		last six months
		RMB equivalent)		(RMB/month)
1.				
2.				
3.				
4.				
5.				
etc.				

Financial Situation

Historical Financial Performance

Bidder's Legal Name:				Date:			
IV Partner Legal					Bidding No.:		
					Page	of	pages
To be completed	by the B	idder and,	if JV, by e	ach partne	er		
	T						
Financial				ious	() years		
information	(RMB e	quivalent i	n 000s)				
in RMB							
equivalent	V4		2	1		T	
	Year 1	Year 2	Year 3	Year	Year n	Avg.	Avg.
Information fro	m Palanc	o Choot					Ratio
Total Assets	III Dalalic	- Sheet					
(TA)							
Total							
Liabilities (TL)							
Net Worth							
(NW)							
Current							
Assets (CA)							
Current							
Liabilities (CL)							
Information fro	l m Income	 	_ nt				
Total		Jeaterne					
Revenue (TR)							
Profits Before							
Taxes (PBT)							
Taxes (I DI)							

- Attached are copies of financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following conditions:
 - Must reflect the financial situation of the Bidder or partner to a JV, and not sister or parent companies
 - Historic financial statements shall be audited by a certified accountant
 - Historic financial statements shall be complete, including all notes to the financial statements
 - Historic financial statements shall correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted)

Form FIN – 3.2

Average Annual Turnover

Bidder's Legal Name:			g No.:	
_		Page	of	pages
	Annual turnover data(constru	uction only)		
		iction only)	DN4D	11
Year	Amount and Currency		RMB equ	ivalent
	- 			
*Average Annual				
Construction Turnover				

^{*}Average annual turnover calculated as total certified payments received for work in progress or completed over the number of years specified in Section III (Evaluation and QualificationCriteria), Sub-Factor 2.3.2, divided by that same number of years.

Form FIN3.3

Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as indicated in Section III (Evaluation and Qualification Criteria)

Source of financing	Amount (RMB equivalent)
1.	
2.	
3.	
4.	

Experience

General Experience

Bidder's Legal Name:	Date:
JV Partner Legal Name:	Bidding No.:
	Page of pages

Starting Month / Year	Ending Month / Year	Years*	Contract Identification	Role of Bidder
		, 505	Contract name: Brief Description of the Works performed by the Bidder: Name of Employer: Address:	
			Contract name: Brief Description of the Works performed by the Bidder: Name of Employer: Address:	
			Contract name: Brief Description of the Works performed by the Bidder: Name of Employer: Address:	
			Contract name: Brief Description of the Works performed by the Bidder: Name of Employer: Address:	
			Contract name: Brief Description of the Works performed by the Bidder: Name of Employer: Address:	
			Contract name: Brief Description of the Works performed by the Bidder: Name of Employer: Address:	

^{*}List calendar year for years with contracts with at least nine (9) months activity per year starting with the earliest

Form EXP – 2.4.2(a)

Specific Experience

Bidder's Legal Name:		Date:	
JV Partner Legal Name:		dding No.:	
		Page	_ of pages
Similar Contract Number: [insert specific number] of[insert total number of contracts required.		Information	
Contract Identification			
Award date			
Completion date			
Role in Contract	Contractor	Management Contractor	Subcontracto r
Total contract amount			RMB
If partner in a JV or subcontractor, specify participation of total contract amount	%		RMB
Employer's Name:			
Address:			
Telephone/fax number:			
E-mail:			

Form EXP – 2.4.2(a) (cont.)

Specific Experience (cont.)

Bidder's Legal Name:	 Page	of	pages
JV Partner Legal Name:			

Similar Contract No[insert specific number] of[insert total number of contracts] required	Information
Description of the similarity in accordance with Sub-Factor 2.4.2 (a) of Section III (Evaluation and Qualification Criteria):	
Amount	
Physical size	
Complexity	
Methods/Technology	
Physical Production Rate	

Form EXP - 2.4.2(b)

Specific Experience in Key Activities

Bidder's Legal Name:		_ Date:		
JV Partner Legal Name:	Bio	dding No.:		
Subcontractor's Legal Name:		Page	of pages	
		Information		
Contract Identification				
Award date				
Completion date				
Role in Contract	Contractor	☐ Management Contractor	Subcontractor	
Total contract amount			RMB	
If partner in a JV or subcontractor, specify participation of total contract amount	%		RMB	
Employer's Name:				
Address:				
Telephone/fax number: E-mail:				

Form EXP – 2.4.2 (b)(cont.)

Specific Experience in Key Activities (cont.)

Bidder's Legal Name: JV Partner Legal Name:		Page	of	pages
Subcontractor's Legal Name:				
		Inform	nation	
Description of the key activities in accordance with Sub-Factor 2.4.2 (b) of Section III (Evaluation and Qualification Criteria):				

Covenant of Integrity to the Employer From the Contractor

"We declare and covenant that neither we nor anyone, including any of our directors, employees, agents, joint venture partners or sub-contractors, where these exist, acting on our behalf with due authority or with our knowledge or consent, or facilitated by us, has engaged, or will engage, in any Prohibited Conduct (as defined below) in connection with the tendering process or in the execution or supply of any works, goods or services for [specify the contract or tender invitation] (the "Contract") and covenant to so inform you if any instance of any such Prohibited Conduct shall come to the attention of any person in our organisation having responsibility for ensuring compliance with this Covenant.

We shall, for the duration of the tender process and, if we are successful in our tender, for the duration of the Contract, appoint and maintain in office an officer, who shall be a person reasonably satisfactory to you and to whom you shall have full and immediate access, having the duty, and the necessary powers, to ensure compliance with this Covenant.

If (i) we have been, or any such director, employee, agent or joint venture partner, where this exists, acting as aforesaid has been, convicted in any court of any offence involving a Prohibited Conduct in connection with any tendering process or provision of works, goods or services during the five years immediately preceding the date of this Covenant, or (ii) any such director, employee, agent or a representative of a joint venture partner, where this exists, has been dismissed or has resigned from any employment on the grounds of being implicated in any Prohibited Conduct, or (iii) we have been, or any of our directors, employees, agents or joint venture partners, where these exist, acting as aforesaid has been excluded by the EU Institutions or any major Multi-lateral Development Bank (including World Bank Group, African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank or Inter-american Development Bank) from participation in a tendering procedure on the grounds of Prohibited Conduct, we give details of that conviction, dismissal or resignation, or exclusion below, together with details of the measures that we have taken, or shall take, to ensure that neither this company nor any of our directors, employees or agents commits any Prohibited Conduct in connection with the Contract [give details if necessary].

In the event that we are awarded the Contract, we grant the Project Owner, the European Investment Bank (EIB) and auditors appointed by either of them, as well as any authority or European Union institution or body having competence under European Union law, the right of inspection of our records and those of all our sub-contractors under the Contract. We accept to preserve these records generally in accordance with applicable law but in any case for at least six years from the date of substantial performance of the Contract."

For the purpose of this Covenant, Prohibited Conduct includes 12,

- **Corrupt Practice** is the offering, giving, receiving or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party.
- **Fraudulent Practice** is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.
- Coercive Practice is impairing or harming, or threatening to impair or harm, directly
 or indirectly, any party or the property of any party to influence improperly the
 actions of a party.
- **Collusive Practice** is an arrangement between two or more parties designed to achieve an
- improper purpose, including influencing improperly the actions of another party
- Obstructive Practice is (a) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or (b) acts intended to materially impede the exercise of the EIB's contractual rights of audit or access to information or the rights that any banking, regulatory or examining authority or other equivalent body of the European Union or of its Member States may have in accordance with any law, regulation or treaty or pursuant to any agreement into which the EIB has entered in order to implement such law, regulation or treaty;
- Money Laundering is defined in the Bank's Anti-Fraud Policy
- Terrorist Financing is defined in the Bank's Anti-Fraud Policy
- **Project Owner**means the person designated as such in the bidding documents or the Contract.

12 Most definitions are those of the IFI Anti Corruption Task Force's Uniform Framework of September 2006.

Section V – Eligible Countries

Not Applicable.

PART 2 – Employer's Requirements

Section VI - Employer's Requirements

I. Technical specifications

1 Project overview

1.1 Work under this contract

This contract covers the construction and installation of heat meters (including pipes, valves and well chambers) involved in energy-saving renovation project of existing buildings in Harbin. The Employer of this project is Heilongjiang Weisheng Building Energy Conservation Engineering Co., Ltd ("Employer"). The contractor shall complete the installation of heat meters (including pipes, valves and well chambers) within the scope of this bid according to the terms and conditions of this contract.

1.2 Scope of this contract

This contract comprises the following scope(items included each well)

- (1) Breakup of asphalt road surface (pedestrian road base plates or lawns);
- (2) Demolition or expansion of existing tubular wells;
- (3) Construction of heat metering well chambers outside the cubic heating chambers.
- (4) Disconnection of existing heat supply pipelines, installation of a heat meter, a filter, a regulating valve, two hard sealing butterflies for closing purposes, a pressure gauge, circulating pipes and circulating pipe valves and drainage valves (screwed plugs);
- (5) Pipeline pressure test, corrosion protection and thermal insulation;
- (6) Restoration of damaged road surfaces, pedestrian road base plates or lawns;

Except as otherwise indicated, the well chamber earthwork involved in this project, costs of materials, tools, labor and utilities required for masonry work, transport costs, costs of coordination with related departments, site clearing and restoration costs, garbage removal costs, environmental protection costs, HSE costs, management expenses and profits are all included in the contract price of this installation project, except for heat meters, regulating

valves, hard sealing butterfly valves for closing purposes, filters, pressure gauges and circulating pipe gate valves which shall be provided by The Employer at its sole costs.

All design requirements are met by these specifications and deemed to have been specifically indicated in the contract documents.

1.3 Required documents

The contractor shall retain at least one set of the following documents on the project site:

- ♦ These technical specifications
- Contract addenda
- Engineering changes
- ♦ Construction schedule

1.4 Technical specifications

- 1.4.1 In these technical specifications, the word "shall" or "the contractor shall" have been omitted in some particular sentences, which shall be deemed complete sentences when read.
- 1.4.2 The word "provide" or "provision" as used herein refers to "supply" or "provision of installation and labor services and shall not be construed merely as provision itself.

1.5 Standards and codes

- The standards and codes referred to in this contract document, including GB, JGJ, ISO and ASTM, shall mean the currently applicable version of the same at the time of the deadline for bidding.
- 2) This contract document shall prevail if the requirements contained in this contract document are more stringent than specified standards.
- 3) The Employer shall have the preemptive right to interpret the contract document when the description of specified standards is inconsistent or otherwise in conflict with any provisions of this contract document.

Any differences between the specified standards and proposed alternative standards shall be detailed in writing by the contractor 28 days prior to the date when the contractor expects to receive consent from The Employer's representative. If these differences can not ensure the

equivalent or better quality, the contractor shall comply with the standards indicated in this contract. For the purposes of examination and test, the contractor shall provide The Employer's representative (or his or her representative) with a copy of proposed standards, along with their Chinese translation.

1.6 Taxes and insurance

- 1) The imported materials for use in permanent works and constituting a part of permanent works shall be provided and delivered by the Employer to the construction site, for which the customs duties shall be paid by the Employer.
- 2) The contractor shall pay customs duties for import of any and all construction machinery and equipment of the contractor for use in this project according to applicable laws and regulations.
- 3) The contractor shall pay the business tax, urban construction and maintenance tax and educational surcharge according to the applicable laws and regulations of the People's Republic of China;
- 4) During the construction period and defect liability period, the contractor shall procure insurance according to the terms and conditions of the contract, including all-risk insurance and third-party liability insurance.
- 5) The contractor shall procure industrial accident insurance for its construction machinery and equipment and it employees according to the terms and conditions of the contract at its sole costs, meaning the premium of such insurance shall be deemed to have been included in the total contract price.

2. Brief description of buildings involved in the energy-saving renovation project of existing buildings in Harbin

The site of the proposed renovation project is located within Daowai District, Xiangfang District and Pingfang District of Harbin City, with a combined building area of about 5 million square meters. Most of buildings involved in this project are energy-consuming buildings built in late 1980's, with 490mm-thick red brick walls and wooden or steel or aluminum alloy windows.

2.1 Climatic conditions of project site

Harbin City is located within North Latitude 44 $^{\circ}$ 04 $^{\prime}$ \sim 46 $^{\circ}$ 40 $^{\prime}$ and East Longitude 125 $^{\circ}$ 42 $^{\prime}$ \sim 130 $^{\circ}$ 10 $^{\prime}$ and in severe cold region, with the highest point being 171.1 m above the sea.

2.2 General information about Harbin City

Harbin City in which the proposed project site is located is situated in middle reaches of Songhua River in northeast China, the capital city of Heilongjiang Province and an important political, economic, technological and cultural center in north of Northeast China.

Harbin City is located in middle latitude region in east of Eurasian Continent, enjoying temperate continental monsoon climate with remarkable monsoon characteristics, characterized by four distinct seasons, long and cold winter and short and hot summer as well as rapid temperature change during spring and autumn.

Harbin enjoys a long history and is the cradle of Jin and Qing dynasties. Harbin accommodates 48 nationalities including Han Chinese, best known as oriental Moscow, oriental Paris and ice city. It has become a historic city and a famous tourist city in China, as well as the largest open city along borders in north of Northeast China.

Harbin accommodates a total population of 10.635971 million people, including 5.878 million urban residents (2010 statistics). With a total area of 53100 square kilometers, the city comprises 8 districts (i.e., Daoli District, Daowai District, Nangang District, Xiangfang District, Pingfang District, Songbei District, Hulan District, Acheng District) and 10 counties and county-level cities (Bayan County, Binxian County, Yilan County, Yanshou County, Mulan County, Tonghe County, Fangzheng County, Wuchang City, Shuangcheng City and Shangzhi City).

Being a major traffic hub in Northeast China, Harbin City enjoys easy access thanks to a well-developed three-dimensional traffic network.

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3. Management Requirements

3.1 Overview

1) The laws and regulations governing the project site shall prevail.

The standards adopted for this project shall meet or exceed the minimum standards

of the People's Republic of China.

3) The contractor shall ensure itself and its subcontractors will comply with the Chinese

laws and regulations on health and safety.

4) The contractor referred to herein shall mean the general contractor.

5) The protection of cultural relics involved in this project shall comply with the

provisions of applicable Chinese laws and regulations.

6) In the process of project implementation, the contractor shall comply with all other

applicable Chinese laws and regulations as if they have been specifically indicated.

3.2 Standards and Regulations

The applicable regulations, standards and provisions are set forth in the related chapters of

these technical specifications. The project shall be implemented according to applicable

regulations, standards and provisions.

3.2.1 Abbreviations

Abbreviations --- Codes, methods and standards

1) Chinese standards

CECS: Standards of China Association for Engineering Construction Standardization

GB: Chinese national standards

GBJ: Chinese national standards

JC:

Chinese building material industry standards

JGJ: Standards promulgated by Chinese Ministry of Construction

2) International standards

ANSI: American National Standards Institute

ASCE: American Society of Civil Engineers

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ASHRAE: American Society of Heating, Refrigerating and Air-Conditioning Engineers

ASTM: American Society for Testing and Materials

AWWA: American Water Works Association

BS: British standards

CAN: Canadian national standards

CSA: Canadian standards

DIN: German standards

ISO: International Standardization Organization

JIS: Japanese standards

Use of abbreviations

These abbreviations refer to codes, methods and standards published by related countries and associations and used in these technical specifications.

Abbreviations --- metric system

Overview

These technical specifications employ SI-based metric system. In these technical specifications, SI units are abbreviated as follows according to metric units:

(1) Measurement of straight line

Meter: m

Millimeter: mm

(2) Area

Square meter: m2

Square centimeter: cm2

(3) Volume

Cubic meter: m3

Liter: (4) Mass and density Kilogram: kg Gram: g Ton: t Kilogram/meter: kg/m Gram/meter: g/m Kilogram/square meter: kg/m2 Gram/square meter: g/m2 Kilogram/cubic meter: kg/m3 (5) Temperature (6) Force, pressure and stress Newton: N 1000 Newton: kN Pascal: Pa Mega Pascal: MPa (7) Speed and flow rate Meter/second: m/s Meter/hour: m/h Kilometer/h: km/h Liter/second: I/s

Cubic meter/second: m3/s

(8) Power, energy, heat and work

Watt: W

Kilowatt: kW

Kilowatt/hour: kWh

Joule: J

(9) Electricity

Ampere: A

Volt: V

Hertz: Hz

3.3 Construction management

3.3.1 Construction plan

Before entry to the construction site, the construction contractor shall provide a detailed construction plan to the Employer. The construction plan may not be implemented without the prior consent of The Employer.

The construction plan covers the following:

- 1) Project overview
- 2) Construction arrangements
- 3) Construction schedule
- 4) Construction preparation and resource allocation plan
- 5) Main construction schemes

3.3.2 Project meetings

3.3.1 Kickoff meeting

The Employer's representative will arrange a kickoff meeting upon award of contract.

The kickoff meeting will be held in the office of The Employer's representative or nearby the project site.

3.3.2 Progress meetings

- 1) A progress meeting shall be held every two weeks after the commencement of the project, followed by meetings to be held every month or upon request of The Employer's representative.
- 2) The venues of progress meetings shall be provided by the contractor on or nearby the project site.
- 3) The Employer 's representative shall notify all parties of the date, time, venue and agenda of meeting in advance.
- 4) Upon the request of The Employer's representative, the contractor shall have its project manager and subcontractors' representatives attend the meetings.
- 5) The Employer shall have its representative and/or onsite engineer attend the meetings.
- 6) The Employer may designate a representative to attend the meetings.
- 7) The Employer 's representative shall keep records of the meetings and provide a copy of meeting minutes to all parties present at the meetings.

3.4 Schedule

3.4.1 Schedule

The contractor shall submit a copy of schedule for buildings in each residential quarter in the form of bar chart to The Employer 's representative for review and approval. The overall schedule shall indicate all main job arrangements, key lines and overall construction period of the project. The monthly schedule shall indicate the timing of activities in current month in line with the overall schedule.

The schedule shall be coordinated with the progress of material supply contract, and the contractor's detailed plan shall indicate that its construction schedule meets the requirements of the material supply contract.

The certificate of payment for the current month will not be issued unless and until The Employer 's representative receives an acceptable schedule. Any costs resulting from any delay in issuance of such certificate will be the sole responsibility of the contractor.

3.4 Record drawings (as-built drawings)

Records during construction period

- The contractor shall retain a complete set of construction drawings on the project site.
- The contractor shall indicate on the contract drawings on the project site any actual changes occurred during the construction period. These changes are recorded for the purpose of providing record drawings upon the completion of the project. The contractor shall be responsible for the sufficiency and reliability of information and data recorded on the drawings.
- 3) Within 28 days of substantial completion of this project, the contractor shall submit a complete set of as-built drawings to The Employer 's representative, indicating all changes occurred during the construction period, as the record drawings of the project.
- 4) The texts in the records and drawings shall be in Chinese or accompanied by Chinese translation.
- The certificate of final completion of the project will not be issued unless and until
 The Employer 's representative receives acceptable records and drawings. Any costs
 resulting from any delay in issuance of such certificate will be the sole responsibility of the
 contractor.

3.5 Quality control plan

3.5.1 Overview

- 1) The contractor shall be solely responsible for the quality of materials provided by it for the project.
- The contractor shall be responsible for quality control and conduct necessary inspections and tests to ensure the project complies with the requirements of contract documents.
- 3) Tests shall comply with applicable instructions and provisions and specified standards such as GB, JGJ, ISO or ASTM.

3.5.2 Quality assurance inspections by the Employer

1) The Employer may at its sole discretion employ an independent inspection agency to

conduct quality assurance inspections at its sole costs.

- 2) The Employer's inspection agency and The Employer 's representative may examine and test whether the materials and works meet the requirements of contract documents, but they will not conduct engineering quality inspection and quality control on behalf of the contractor.
- Inspections and tests conducted by the Employer's inspection agency or The Employer's representative will not relieve the contractor from its responsibility to provide construction according to contract documents.

3.5.3 Quality control plan

The contractor shall develop a detailed quality control plan before commencement of construction activities. The quality control plan shall comply with these technical specifications and the Employer's detailed quality control manual. Three copies of the Employer's quality control manual shall be provided to the construction contractor at the time of execution of the construction contract for use in development of the quality management plan.

4. Construction requirements

4.1 Well chamber excavation and backfill

4.1.1 Overview

1. Description

- 1) This section specifies the requirements for well chamber excavation/backfill.
- 2) The scope of this work includes development of a construction schedule based on the arrangements of existing heat supply plumbing, as detailed below:

Construction scheme 1: the existing heating pipe duct shall be such that the pipe section before the heat meter is of length 10 times the pipe diameter and the pipe section after the heat meter is of length 5 times the pipe diameter; the well width shall meet the requirements of the specifications, in which case only one heat meter, a filter, a regulating valve, two butterfly valves and connecting steel tubes will be installed. This type of installation shall comply with the requirements for construction of pipeline.

Construction scheme 2: construction of a new heating well chamber (consisting of A-type well (7000*2000*2000) with a pipe diameter of more than 150 mm and B-type well

(6000*1800*1800) with a pipe diameter of 150 mm or less) according to the pipe diameter of heat meter), installation of a heat meter, a filter, a regulating valve, two butterfly valves and connecting steel pipes. The length and width of the new well chamber shall be such that the pipe section before the heat meter is of length 10 times the pipe diameter and the pipe section after the heat meter is of length 5 times the pipe diameter; the well width shall meet the requirements of the specifications. This type of well chamber shall comply with the requirements for civil works and pipeline installation. The Cover of the Heat Meter Well shall be made of Casting Iron.

3) Civil works when new well chambers need to be built

- ♦ All materials encountered in the process of well chamber excavation can be placed to the depth and elevation that meets the applicable requirements;
- Pileup of excavated materials;
- ♦ Removal and replacement of unsuitable materials;
- ♦ Provision and installation of pipe beddings and base materials;
- ♦ Well chamber backfill;
- ♦ Restoration of ground surface

2. Quality assurance

Provision of samples of pipes and thermal insulating materials;

3. Protection

- Protection of existing facilities and structures;
- Construction facilities, including temporary equipment, temporary fences, construction roads and traffic management.

4.2 Materials

Concrete GB50204-2002。

4.3 Installation

1) Preparation

- ♦ The contractor shall prepare temporary fences or repair the existing fences on the project site. Upon completion of construction activities, the contractor shall conduct permanent repair to restore the project site to its original state.
- Pile up usable excavations separately from other materials for future backfill.
- Peel off the surface soil with turf and pile it up in a nearby location, but separately from the excavations;
- ♦ The width of stripping shall be sufficient for excavation, pipe laying, backfill and surface soil restoration and avoid mixture of materials or any loss to the surface soil. The depth and width of stripping shall be subject to the prior approval of The Employer's representative.
- Road surfaces to be cut shall be straight and parallel with the center line of the well chamber. The cutting width may not exceed the specified maximum width of the well chamber on the ground surface.
- Well chamber support, damper or other methods may be used to prevent the road surface damage from exceeding the allowable width.
- ♦ If the nature of soil is not suitable for supporting the well chamber, the road surface to be cut wider than the allowable width shall be subject to the approval of the competent authorities.
- ♦ Dispose of the removed road surface materials.
- ♦ The contractor shall level any ground surface of more than 15 degrees within the project site without any adverse impact on the existing drainage paths.

2) Excavation

- (1) Length——the length of well chamber to be excavated in advance shall meet the requirements for safety, drainage and traffic conditions.
 - (2) Passageways for pedestrian and vehicular traffic shall be reserved at all local roads.
- (3) The excavation activities shall ensure the pipelines will meet the requirements for position and gradient of installation.

- (4) Excavated materials shall be piled up along the well chamber within the approved construction area without any adverse impact on construction activities or interference with pedestrian or vehicular traffic or draining surface water to other public utilities/channels. Subject to the aforesaid requirements, excavated materials shall be removed and piled up in a place for easy backfill of well chamber if pileup along the ditch is impractical or impossible. Excavated materials may not be piled up on the existing pipelines.
 - Dispose of wastes or residual materials;
 - 4) Water:
 - ◆ Drain water in an appropriate manner such that the pipe erection will not cause harmful impact to pipelines, well chambers or neighboring properties.
 - Sewage pipes may not be used for drainage purposes and sandy water may not be discharged into existing storm-water drains.

5) Temporary protective structures

- ♦ Temporary protective structures, supports and dampers shall be designed by qualified engineers under the responsibility of the contractor.
- ♦ Comply with the applicable provisions concerning protection of works, properties and neighboring structures.
- ♦ Where necessary, use enclosed dampers to ensure the neighboring soil will not enter the well chamber from any damper or its bottom.

6) Crossing with existing facilities

- ♦ Keep the water supply, sewage and drainage systems uninterrupted during the construction activities.
- Support existing water supply pipes, drainage pipes, gas pipes and other pipelines and protect them from damage.
- ♦ If any water supply pipes, drainage pipes, gas pipes or other pipelines, cables, pavements, curbs or structures are damaged due to construction activities, the costs of repair and restoration shall be borne by the contractor.

♦ Contact the property Employers to identify the locations of all structures, pipes, manholes and valves by checking the drawings and conducting tentative excavation. Conduct prospecting and excavation when necessary.

7) Width of well chamber

- ♦ The width of well chamber shall be such that the pipelines can be laid down and connected.
- ♦ The width of excavation of well chamber shall be such that the safety of neighboring pipelines, roads, buildings and traffic safety will not be adversely affected.
- ♦ The contractor shall determine whether slope excavation or support excavation is appropriate and ensure the stability of slopes and safety of excavation.

8) Well chamber beddings

♦ The beddings shall be built in place according to the drawings and pipeline installation instructions.

9) Well chamber backfill

- ♦ Well chamber backfill is defined as the backfill along the perimeter of the well chamber construction area.
- ♦ Remove all excessive excavated materials.
- If the excavation takes place on dirty roads or gravel pavement, compact the particle materials to the initial elevation such that the restored ground surface is as the same or better than the original ground surface.
- ♦ If the excavation takes place on black pavements, compact the particle materials to the substrate elevation indicated on the drawings and restore the black pavements to or better than their original state.

10) Clearing

Clear and dispose of all residual materials, wastes and garbage as the project progresses.

- ♠ Repair the permanent fences;
- Restore all public and private roads, temporary roads, stockyards and storage yards to their original state.

11) Restoration

- Restore or replace any pedestrian ways, curbs, ditches, shrubs, fences, electricity poles or other surface structures damaged or relocated during construction period using labor and materials provided by the contractor at the sole costs of the contractor.
- ♦ After well chamber backfill, restore the surface to the original elevation and conditions;
- Restore other worksites affected by construction operations to their original elevations and conditions using re-leveling, graveling or paving.

4.4 Heat meters, valves and pipelines

4.4.1 Overview

- 1) Description
 - ♦ This section specifies the requirements for installation of heat meters, heating pipes and valves.
 - ♦ This work includes supply and installation of pipes and connecting materials, installation, cleaning and test of accessories, valves and heat meters.
 - ◆ The Employer shall be only responsible for providing the materials indicated in Section 1.2 of this Technical Specifications, while all other materials shall be provided by the contractor.
- 2) Related activities
 - ♦ Excavation and backfill of well chamber
- Quality assurance
 - Submit samples, test results and certificates of conformity for initial recognition of materials;

- ♦ The materials and works provided in this section shall comply with applicable standards such as GB, ISO, AWWA or ASTM or JC.
- ♦ The Employer's representative may at any time require the contractor to issue a certificate of conformity provided by an independent inspection agency, evidencing that the contractor-supplied materials meet the specified standards, at the sole costs of the contractor.
- ♦ The lab responsible for material test shall be a qualified third-party independent testing agency.

4) Submission of documents

- ♦ Submit suggestions concerning procurement of pipes according to the requirements of applicable sections of these technical specifications.
- ♦ Submit a pipe pressure test plan to The Employer 's representative for review and approval before commencement of the pipeline pressure test.
- 5) Transport, storage and disposal of products
 - Pipes and required materials shall be unloaded and stored by the contractor onsite carefully in order to avoid any damages.
 - ♦ Keep the stored materials clean.
 - Open the drainage valves to prevent any damages caused by freezing of residual water.
 - ♦ Store pipes according to the manufacturer's suggestions.

6) Standards and regulations

- ◆ Code of Practice for Construction and Acceptance Check of Building Water

 Supply and Drainage and Heating Works GB50242-2002
- ♦ Code of Practice for Construction and Acceptance Check of Urban Heat Supply
 Pipeline Works

 CJJ28-2004

4.4.2 Products

Pipelines: welded steel pipes and fittings, heat meters, regulating valves and hard sealing butterfly valves for closing purposes.

4.4.2.1 Implementation

1) Pileup

- While piling up, prevent any damage/destruction to the pipelines, fittings and valves.
- Pileup of pipelines shall not affect construction activities or passage of the Employer and occupants.

2) Well chamber check

♦ Notify The Employer 's representative when the well chamber is found satisfactory.

3) Examination of pipelines and fittings

- Examine pipelines and fittings immediately before the pipelines are placed into the well chamber.
- ♦ Clear the pipes, fittings and valves before installation.
- 4) Place the heat meters, valves, pipes and fittings into the well chamber and set up a safety ladder.
 - ♦ The pipes and materials may not come directly down to the bottom of ditches.
 - ♦ If necessary, cover both ends of pipes to keep them clean.
 - ♦ The safety ladder shall have the minimum load of 150 kg.

5) Pipe laying——general

- ♦ If it is necessary to cut pipes for erection of fittings and valves, vertically and accurately cut the pipes using the manufacturer-recommended tools.
- ♦ The error of pipes at the connecting points may not exceed the manufacturer's requirements.
- ♦ Pipes may not be laid down in water.
- ♦ When stopping laying down pipes, cover the open ends of installed pipes to prevent water from entering the pipes from the well chamber.

6) Hydrostatic test——general

- ♦ The contractor shall provide all equipment and personnel required for completion of the hydrostatic test.
- ♦ The contractor shall notify The Employer 's representative 24 hours prior to commencement of hydrostatic test.
- Unless the pipelines can be safely emptied or be put into operation immediately after the test, the ambient temperature at the time of test shall be no less than 5° C.

7) Pressure test

Examine the operation of all valves in the presence of The Employer 's representative. Conduct the pressure test according to provisions of applicable sections.

Using the water pressure specified in GB50242-2002 "Code of Practice for Construction and Acceptance Check of Building Water Supply and Drainage and Heating Works"

CJJ28-2004 "Code of Practice for Construction and Acceptance Check of Urban Heat Supply Pipeline Works"

- ♦ Examine all pipe connectors for any leakage and eliminate any leakage or replace damaged pipes.
- 8) Flushing and decontamination
 - ♦ Clean the pipes and clear all fouls.
 - ♦ According to the provisions and methods set forth in applicable codes and standards or by reference to the requirements of AWWA standard "facility decontamination".

5. Acceptance procedure and quality criteria

5.1 Acceptance procedure

1) After completion of installation of heat meters, the construction contractor shall make arrangements for related personnel to conduct self examination in the presence of the

Employer's representative. The construction contractor shall compile quality control documents in connection with the project and submit the same to the Employer. If the project deliverables are found defective in workmanship, the construction contractor shall make corrections. Upon completion of correction, the construction contractor shall submit a completion report to the Employer and apply to the Employer for final acceptance.

- Upon receipt of the completion report, the Employer will arrange related technical personnel to conduct final acceptance of the completed project.
- 3) Upon successful acceptance check, the Employer will sign and seal the completion report/completion certificate.

5.2 Acceptance criteria

Reference standards:

- 1) "Heilongjiang Provincial Standards" 23 DB
- 2) "Standard for Workmanship Acceptance of Construction Projects" GB50300-2013
- 3) "Code of Practice for Construction and Acceptance Check of Building Water Supply and Drainage and Heating Works" GB50242-2002
- 4) "Code of Practice for Construction and Acceptance Check of Urban Heat Supply Pipeline Works" CJJ28-2004
- "Standard for Quality Acceptance of Architectural Decoration and Refurnishing Works"
 GB30210
- 6) "Standard for Quality Acceptance of Masonry Structures" GB_50203-2011
- "Standard for Quality Acceptance of Concrete Structures" GB 50204-2011

5.2.1 Acceptance standards and codes of practice for pipelines, heat meters, valves and filters

 The quality of materials, pipes and fittings for pressure test of heating pipelines shall comply with the requirements of applicable national, industry and local standards in effect.

Test methods: certificate of conformity and test report

2) Pipeline pressure test: conduct hydrostatic test before thermal insulation of pipelines at a test pressure of 1.5 times the working pressure but no less than 0.6 MPa.

Test methods: pressure drop of no more than 0.05 MPa within 10 minutes of pressure test before pressure drop to the working pressure, without any leakage or seepage.

- 3) Cleaning: clean the pipelines and filters after completion of the pipeline installation.
 - Test methods: onsite observation, discharged water contains no silt, sand, scrip iron or other impurities and is clear.
- 4) The specifications, models, nominal pressures and installation positions of heat meters, gate valves and filters shall comply with the requirements of currently applicable national, industry and local standards in effect.
 - Test methods: by reference to drawings and certificate of conformity of products.
- 5) The weld seam sizes, grooves, mating types, high-low deviations, welded junction flatness and height and width of wool-containing reinforced surface of the welded joints of steel pipes shall comply with the provisions of Subsection 6.3.5 of Heilongjiang Provincial Standards 23DB (welded junction flatness: allowable deviation of 1/4mm from the pipe wall thickness; allowable deviation height and width +1mm.)
 - Number of welded joints to be examined: no less than 10.
 - Test methods: observation and examination by measuring gauge.
- 6) The structure and construction of thermal insulation layer and protective layer of pipelines shall comply with the design requirements.
 - Number of sections to be examined: 3 sections per one hundred meters of the thermal insulating pipeline, no less than 10 points.
 - Test methods: observation or cutting the thermal insulation layer open using a knife.

5.2.2 Acceptance criteria for well chamber

- 5.2.2.1 Workmanship criteria for heat well
 - 1) The coordinates and location of tubular well and bottom level of tubular well shall meet the design requirements.
 - Examination methods: observation, examination by measuring gauge.
 - 2) The bottom of tabular well shall be original soil layer.
 - Examination methods: observation
 - 3) The level of strength of concrete beddings at the bottom of tubular well shall meet the design requirements and the concrete beddings shall be commodity concrete. The bedding levelness deviation may not be more than 8mm.
 - Examination methods: receipt of commodity concrete and test specimen examination report.

- 4) The walls of tubular well shall be built from porous bricks or fly-ash sintered bricks, using blocks and mortar of such strength level that meets the design requirements.
 - Examination methods: examination of certificate of conformity and acceptance test report for the building blocks and mortar as well as the strength type approval report for building blocks and specimen test report for mortar.
- 5) The mortar saturation of horizontal mortar joints of masonry unit shall be no less than 80%.
 - Examination methods: examination of the area of adhesive interface between brick bottom and mortar using a mortar fullness measuring grid.
- 6) The allowable deviation of verticality of brick masonry unit shall be less than or equal to 50 mm, and the surface levelness shall be 8 mm or less.
 - Examination methods: examination using a measuring gauge.
- 7) The mortar joints of brick masonry unit shall be straight up and down and parallel to the floor and even in thickness. The horizontal and vertical mortar joints shall be preferably 10 mm thick, but shall not be less than 8 mm or more than 12 mm. The mortar joints shall be free of any tight joints, transparent joints or false joints.
 - Examination methods: observation and examination by measuring a 10-unit brickwork at a reduced height.
- 8) Appropriate type of prefab cover plates shall be selected from the collective drawings according to the design requirements.

6. Environmental and Social Management Plan

The contractor shall meet the requirement stipulated in the Environmental and Social Management Plan, which is detailed in the Annex "Environmental and Social Management Plan" in the Bidding Document.

II. Bill of quantities

1. Introduction

1.1 General terms

- This bill of quantities shall be read in conjunction with the instructions to bidders, form of bid, general terms of contract, special terms of contract, technical specifications and drawings.
- 2) The quantities listed in the bill of quantities are estimated and tentative and intended to provide a common basis for bidding. Payment will be calculated according to the actual quantities completed in the project as measured by The Employer 's representative and based on the unit prices indicated in the bill of quantities.
- 3) Unless otherwise specified in the contract, the unit prices and total prices indicated in the bill of quantities shall cover costs of all construction equipment, labor, management, materials, installation, repair, insurance, profits, taxes and all risks, obligations and responsibilities specified or implied in the contract.
- 4) Whether or not the quantities are specified clearly, unit prices or total prices shall be indicated in the bill of quantities for each item thereof. For items for which the contractor does not indicate the unit prices or total prices in the bill of quantities, their costs will be deemed to have been included in other unit prices or total prices indicated in the bill of quantities.
- 5) All costs required to meet the contractual requirements shall be included in items indicated in bill of quantities with quoted prices, and costs of items not listed in the bill of quantities shall be deemed to have been allocated into unit prices or total prices of other items related to the project.
- 6) General provisions and description of works and materials are no longer repeated and recapitulated in the bill of quantities. When completing the bill of quantities, please refer to the applicable sections and terms of the contract document.

- 7) The Employer will correct the arithmetic errors found in calculation and summation process using the following method.
- 8) When amounts expressed in numbers differ from amounts expressed in words, the amounts expressed in words shall prevail.
- 9) The unit prices shall prevail if the unit prices differ from the total prices calculated based on unit prices multiplied by workload. Unless the Employer deems there is any remarkable misplacement of decimal points in the unit prices, the total prices indicated in the bill of quantities shall prevail and the unit prices corrected accordingly.

1.2 Bill of quantities

Summary Table of Quotations in Bill of Quantities (heat meters and well chambers)

No.	Construction method	Form No.	Unit	Qty	Unit price	Total
1	Installation of heat meters in existing well chambers(cons truction scheme)	Form 1	Piece	297		
2	(Construction scheme 1) new heat well A	Form 2	Set	5		
3	(Construction scheme 2) new heat well B	Form 3	Set	443		
Total						

Remarks: when any workload changes of sizes or construction schemes of individual heat wells is more than or equal to ±20%, the both parties shall agree upon unit prices separately.

II. Drawings: to be provided at the time of construction, if any.

III. Additional information: N/A

PART 3 – Contract

Section VII. General Conditions of Contract

These General Conditions of Contract (GCC), read in conjunction with the Particular Conditions of Contract(PCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

These General Conditions of Contract have been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The GCC can be used for both smaller admeasurement contracts and lump sum contracts.

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General Conditions of Contract

A. General

1. Definitions

- **1.1** Boldface type is used to identify defined terms.
 - (a) The Accepted Contract Amount means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.
 - **(b)** The Activity **Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract forming the Bid. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
 - (c) The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 24.
 - (d) Financing Institution means the institution as named in the PCC.
 - **(e) Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
 - (f) Compensation Events are those defined in GCC Clause 42 hereunder.
 - (g) The Completion Date is the date of completion of the Works as certified by the Project Supervisor, in accordance with GCC Sub-Clause 54.1
 - (h) The Contract is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Sub-Clause 2.3 below.
 - (i) The Contractor is the party whose Bid to carry out the Works has been accepted by the Employer.
 - (j) The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.
 - (k) The Contract Price is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.
 - (I) Days are calendar days; months are calendar months.
 - (m) Day works are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
 - (n) A **Defect** is any part of the Works not completed in accordance with the Contract.
 - **(o)** The **Defects Liability Certificate** is the certificate issued by Project Supervisor upon correction of defects by the Contractor.

- **(p)** The **Defects Liability Period** is the period **named in the PCC** pursuant to Sub-Clause 34.1 and calculated from the Completion Date.
- (q) Adjudicator means the single person appointed under Clause 24.
- (r) Drawingsmeans the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, include calculations and other information provided or approved by the Project Supervisor for the execution of the Contract.
- (s) The Employer is the party who employs the Contractor to carry out the Works, as specified in the PCC.
- (t) Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- (u) Force Majeure means an exceptional event or circumstance; which is beyond a party's control; which such party could not reasonably have provided against before entering into the Contract; which, having arisen, such party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other party.
- (v) In writing or written means hand-written, type-written, printed or electronically made, and resulting in a permanent record;
- (w) The Initial Contract Price is the Contract Price listed in the Employer's Letter of Acceptance.
- (x) The Intended Completion Date is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the PCC. The Intended Completion Date may be revised only by the Project Supervisor, with prior approval of the Employer, by issuing an extension of time or an acceleration order.
- (y) The Letter of Acceptance means the letter of formal acceptance, signed by the Employer, of the Letter of Bid, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression "Letter of Acceptance" means the Contract Agreement and and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.
- (z) Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- (aa) Plantis any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- (bb) The Project Supervisor is the person, independent from the Employer, named in the PCC (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Supervisor) who is appointed by the Employer to be responsible for supervising the execution of the Works and administering the Contract.

- (cc) PCC means Particular Conditions of Contract.
- (dd) The Retention Money means the accumulated retention moneys which the Employer retains under Sub-Clause and pays under Sub-Clause
- (ee) The Site is the area defined as such in the PCC.
- **(ff) Site Investigation Reports** are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site.
- (gg) Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Supervisor.
- **(hh)** The **Start Date** is **given in the PCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- (ii) A Subcontractor is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- (jj) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- **(kk)** A Variation is an instruction given by the Project Supervisor which varies the Works.
- (II) The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, **as defined in the PCC**.

2. Interpretation

- 2.1 In interpreting these GCC, words indicating one gender include all genders. Words indicating the singular also include the plural and words indicating the plural also include the singular. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Supervisor shall provide instructions clarifying queries about these GCC.
- 2.2 If sectional completion is **specified in the PCC**, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- **2.3** The documents forming the Contract shall be interpreted in the following order of priority:
 - a) Agreement,
 - **b)** Letter of Acceptance,

- c) Contractor's Bid,
- d) Particular Conditions of Contract,
- e) General Conditions of Contract,
- f) Specifications,
- g) Drawings,
- h) Priced Bill of Quantities,5 and
- i) any other document listed in the PCC as forming part of the Contract.
- 3. Language and Law
- **3.1** The language of the Contract is English and the laws governing the Contract are the prevailing laws of China.
- 4. Project
 Supervisor's Duties
 and Authorities
- 4.1 The Project Supervisor may exercise the authority specified in or necessary to be implied from the Contract, provided always that if he is required, under the terms of the Contract and/or his appointment by the Employer, to obtain the specific approval or consent of the Employer prior to exercising any such authority. In any case, except as expressly stated in the Contract, the Project Supervisor shall have no authority to relieve the Contractor of any of his obligations under the Contract.
- 4.2 The Project Supervisor shall clarify queries on Particular Conditions of Contract.
- **4.3** The Project Supervisor shall obtain the specific approval of the Employer before taking any of the following actions:
 - approval to the subletting of any part of the Works under Clause 7;
 - certifying additional cost determined under Clause 37 in case of admeasurement contract;
 - determining an extension of time under Clauses 26, 27, 28 and 29; and
 - fixing rates or prices under Sub-Clause 42.3 and under Sub-Clause 38.3.

5. Delegation

5.1 Unless otherwise specified in the PCC, the Project Supervisor may delegate any of his duties and responsibilities to other

In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule."

people, except to the Adjudicator, after notifying the Contractor, and may revoke any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Project Supervisor, but may not in any case assign the Contract. Subcontracting shall not alter the Contractor's obligations.

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the PCC. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may from time to time modify through the Project Supervisor the Schedule of Other Contractors, and shall notify the Contractor of any such modification.

9. Personnel Equipment

and 9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the Project Supervisor. The Project Supervisor shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

- 9.2 If the Project Supervisor requests the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.
- 10. Employer's and Contractor's Risks
- **10.1** The Employer carries the risks, which this Contract states are Employer's risks, and the Contractor carries the risks, which this Contract states are Contractor's risks.

11. Employer's Risks

- **11.1** From the Start Date until the Defects Liability Certificate has been issued, the following are Employer's risks:
 - (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - (i) use or occupation of the Site by the Works or for the

purpose of the Works, which is the unavoidable result of the Works or

- (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
- **(b)** The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or the nature of Force Majeure.
- 11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to
 - (a) a Defect which existed on the Completion Date,
 - **(b)** an event occurring before the Completion Date, which was not itself an Employer's risk, or
 - (c) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.

13. Indemnities

- **13.1** Each party shall indemnify the other party against losses, extra expenses and claims for loss or damage to the property, injury and death of personnel caused by his own acts or omission.
- **13.2** The party claiming indemnity shall take all reasonable measures to mitigate the loss or damage which may occur.
- **13.3** The Contractor shall indemnify the Employer against claims for damages caused by the movement of the Equipment or Temporary Works outside the Site.

14. Insurance

14.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover all risks, including the loss of or damage to the Work, Plant, Materials, Equipment, the properties (except stated above) in connection with the execution of the Contract, and personal injury or death, from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles satisfactory to the Employer.

The following insurances shall be provided for the purpose of this sub-clause:

- (a) Insurance for Works and Contractor's Equipment;
- **(b)** Insurance against injury to personnel and damages to Property;
- (c) Insurance for Contractor's Personnel; and
- (d) other insurances required in PCC.
- **14.2** Policies and certificates for insurance shall be delivered by the Contractor to the Project Supervisor for the Project Supervisor's approval fourteen days (14 days) prior to the Start Date. All such insurance shall provide for compensation to be payable in the RMB to rectify the loss or damage incurred.
- 14.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- **14.4** Alterations to the terms of insurance shall not be made without the approval of the Project Supervisor.
- **14.5** Both parties shall comply with any conditions of the insurance policies.

15. Site Data and Details to be Confidential

- **15.1** The Contractor shall be deemed to have examined any Site Data **referred to in the PCC**, supplemented by any information available to the Contractor.
- 15.2 The Contractor shall treat the details of the Contract as private and confidential, save in so far as may be necessary for the purpose thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the Employer or the Project Supervisor. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract the same shall be referred to the Employer whose decision shall be final.

16. Contractor to Construct the

16.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

Works

17. The Works to Be Completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Supervisor, and complete them by the Intended Completion Date.

18. Approval by the Project Supervisor

- **18.1** The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Supervisor, for his approval.
- **18.2** The Contractor shall be responsible for design of Temporary Works.
- **18.3** The Project Supervisor's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- **18.4** The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.
- **18.5** All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Supervisor before this use.

19. Safety and Protection of Environment

- **19.1** The Contractor shall be responsible for the safety of all activities on the Site.
- 19.2 The Contractor shall take all reasonable measures according to applicable environmental protection laws and regulations to protect the environment on and in vicinity of the Site and avoid damage or nuisance to personnel or to property of the public and others resulting from pollution, noise or other causes arising as a consequence of the Contractor's acts and/or operation.

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall promptly notify the Project Supervisor of such discoveries and carry out the Project Supervisor's instructions for dealing with them.

21. Possession of the Site

21.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the PCC, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

22. Access to the Site

22.1 The Contractor shall allow the Project Supervisor and any

person authorized by the Project Supervisor access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

23. Instructions, Inspections and Audits

- **23.1** The Contractor shall carry out all instructions of the Project Supervisor which comply with the applicable laws where the Site is located.
- 23.2 The Contractor shall permit, and shall cause its Subcontractors and subconsultants to permit the Financing Institution and/or persons appointed by the Financing Institution to inspect the Site and/or the accounts and records of the Contractor and its sub-contractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the Financing Institution if required by the Financing Institution. The Contractor's attention is drawn to Sub-Clause 59.1 which provides, inter alia, that acts intended to materially impede the exercise of the Financing Institution's inspection and audit rights provided for under this sub-clause constitute a prohibited practice subject to contract termination. The Contractor shall maintain all documents and records related to the Contract for a period of three (3) years after completion of the Works. The Contractor shall provide any documents necessary for the investigation of allegations of fraud, collusion, coercion or corruption and require its employees or agents with knowledge of the Contract to respond to questions from the Financing Institution.

24. Appointment of the Adjudicator

- 24.1 The Adjudicator shall be appointed jointly by the Employer and the Contractor, at the time of the Employer's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in the PCC, to appoint the Adjudicator within 14 days of receipt of such request.
- 24.2 Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within thirty (30) days, the Adjudicator shall be designated by the Appointing Authority designated in the PCC at the request of either party, within 14 days of receipt of such request.

25. Procedure for Disputes

- 25.1 If the Contractor believes that a decision taken by the Project Supervisor was either outside the authority given to the Project Supervisor by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within fourteen (14) days of the notification of the Project Supervisor's decision.
- **25.2** The Adjudicator shall give a decision in writing within twenty eight (28) days of receipt of a notification of a dispute.
- 25.3 The Adjudicator shall be paid by the hour at the rate specified in the PCC, together with reimbursable expenses of the types specified in the PCC, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within twenty eight (28) days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above twenty eight (28) days, the Adjudicator's decision shall be final and binding.
- **25.4** The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and in the place specified **in the PCC.**

B. Time Control

26. Program

- **26.1** Within the time **stated in the PCC**, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Supervisor for approval a Program, in the format acceptable to the Project Supervisor, showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule.
- **26.2** An update of the Program shall be based on the baseline program approved by the Project Supervisor and a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 26.3 The Contractor shall submit to the Project Supervisor for approval an updated Program at intervals no longer than the period stated in the PCC. If the Contractor does not submit an updated Program within this period, the Project Supervisor may withhold the amount stated in the PCC from the next payment certificate and continue to withhold this amount until the next

payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Supervisor.

- **26.4** The Project Supervisor's approval of the Program and/or the updated Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Project Supervisor again at any time. A revised Program shall show the effect of Variations and Compensation Events.
- 27. Extension of the Intended Completion Date
- 27.1 The Project Supervisor shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 27.2 The Project Supervisor shall decide whether and by how much to extend the Intended Completion Date within twenty one (21) days of the Contractor requesting the Project Supervisor for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Acceleration

- **28.1** When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Supervisor shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.
- **28.2** If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.
- 29. Delays Ordered by the Project Supervisor
- **29.1** The Project Supervisor may instruct the Contractor to delay the start or progress of any activity within the Works.
- 30. Management Meetings
- 30.1 Either the Project Supervisor or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the

early warning procedure.

30.2 The Project Supervisor shall prepare the minutes of management meetings and provide copies of the minutes to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Supervisor either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

31. Early Warning

- 31.1 The Contractor shall warn the Project Supervisor at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Supervisor may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- **31.2** The Contractor shall cooperate with the Project Supervisor in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Supervisor.

C. Quality Control

32. Identifying Defects

32.1 The Project Supervisor shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Supervisor may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Supervisor considers may have a Defect.

33. Tests

33.1 If the Project Supervisor instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

34. Correction of Defects

34.1 The Project Supervisor shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is **defined in the PCC.** The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

34.2 Every time notice of a Defect is given, the Contractor shall

correct the notified Defect within the length of time specified by the Project Supervisor's notice.

35. Uncorrected Defects

35.1 If the Contractor has not corrected a Defect within the time specified in the Project Supervisor's notice, the Project Supervisor shall assess the cost of having the Defect corrected, and the amount of such cost shall become payable by the Contractor to the Employer.

D. Cost Control

36. Contract Price

- 36.1 In the case of an admeasurement contract, the Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.
- 36.2 In the case of a lump sum contract, the Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for Materials on Site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

37. Changes in the Contract Price

- **37.1** In the case of an admeasurement contract:
 - (a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Supervisor shall adjust the rate to allow for the change.
 - (b) The Project Supervisor shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than fifteen (15) percent, except with the prior approval of the Employer.
 - (c) If requested by the Project Supervisor, the Contractor shall provide the Project Supervisor with a detailed cost breakdown of any rate in the Bill of Quantities.
- **37.2** In the case of a lump sum contract, the Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered

when the Contractor makes such changes to the Activity Schedule.

38. Variations

- **38.1** All Variations shall be included in updated Programs, and, in the case of a lump sum contract, also in the Activity Schedule, produced by the Contractor.
- **38.2** The Contractor shall provide the Project Supervisor with a quotation for carrying out the Variation when requested to do so by the Project Supervisor. The Project Supervisor shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Supervisor and before the Variation is ordered.
- **38.3** If the Contractor's quotation is unreasonable, the Project Supervisor may order the Variation and make a change to the Contract Price, which shall be based on the Project Supervisor's own forecast of the effects of the Variation on the Contractor's costs.
- **38.4** If the Project Supervisor decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- **38.5** The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.
- **38.6** In the case of an admeasurement contract, if the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Supervisor, the quantity of work above the limit stated in Sub-Clause 37.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.

39. Cash Flow Forecasts

39.1 When the Program, or, in the case of a lump sum contract, the Activity Schedule, is updated, the Contractor shall provide the Project Supervisor with an updated cash flow forecast.

40. Payment Certificates

40.1 The Contractor shall, by the fifth day of each month, submit to the Project Supervisor, together with the Monthly Progress Report in a format acceptable to the Project Supervisor, monthly statements of the estimated value of the work

- executed less the cumulative amount certified previously.
- **40.2** The Project Supervisor shall examine and verify the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- **40.3** The value of work executed shall be determined by the Project Supervisor.
- **40.4** The value of work executed shall comprise:
 - (a) In the case of an admeasurement contract, the value of the quantities of work in the Bill of Quantities that have been completed; or
 - **(b)** In the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule.
- **40.5** The value of work executed shall include the valuation of Variations and Compensation Events.
- **40.6** The Project Supervisor may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

41. Payments

- 41.1 Payments shall be adjusted for deductions for advance payments, retention and payment payable to the Employer, if any, as specified in the Contract. The Employer shall pay the Contractor the amounts certified by the Project Supervisor within twenty eight (28) days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated on a daily basis from the date by which the payment should have been made up to the date when the late payment is made at the rate equals to the prevailing annual rate of interest for commercial borrowing divided by 365.
- **41.2** If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated on a daily basis from the date upon which the increased amount would have been certified in the absence of dispute.
- **41.3** Unless otherwise stated, all payments and deductions shall be

paid or charged in bidding currency.

41.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

42. Compensation Events

42.1 The following shall be Compensation Events:

- (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 21.1.
- (b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.
- (c) The Project Supervisor orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
- (d) The Project Supervisor instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
- **(e)** The Project Supervisor unreasonably does not approve a subcontract to be let.
- (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
- (g) The Project Supervisor gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
- (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
- (i) The advance payment is delayed.
- (j) The effects on the Contractor of any of the Employer's Risks.
- (k) The Project Supervisor unreasonably delays issuing a

Certificate of Completion.

- 42.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Supervisor shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 42.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Supervisor, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Supervisor shall adjust the Contract Price based on the Project Supervisor's own forecast. The Project Supervisor shall assume that the Contractor shall react competently and promptly to the event.
- **42.4** The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Supervisor.

43. Tax

- 43.1 The Contract Price shall include all taxes, duties, levies and other likes that may be levied by concerned authorities and/or agencies of the People's Republic of China and payable by the Contractor in accordance with the laws and regulations in being on the date twenty-eight (28) days prior to the latest date of bid submission in the People's Republic of China. The Project Supervisor shall adjust the Contract Price if taxes, duties, and other levies are changed between the date twenty eight (28) days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 45.
- 44. Currencies
- **44.1** The payments are only made *in bidding currency*.
- 45. Price Adjustment
- 45.1 Prices shall be adjusted for fluctuations in the cost of inputs only if **provided for in the PCC.** If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due. A formula of

the type indicated below applies to price adjustment:

P = A + B Im/Io

where:

P is the adjustment factor for the Contract Price payable.

A and B are coefficients⁶ specified in the PCC, representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable; and

Im is the index prevailing at the end of the month being invoiced and lo is the index prevailing twenty eight (28) days before Bid opening for inputs payable.

- **45.2** In case, at any time, the prevailing index is not available, a provisional index shall be determined by the Project Supervisor subject to the subsequent adjustment both to the index and payment made to the Contractor, pursuant to the provision of Sub-Clause 45.3, when the index has been made available.
- **45.3** If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs.
- 46. Retention
- **46.1** The Employer shall, commenced from the first payment certificate, retain from each payment due to the Contractor the proportion **stated in the PCC** until the full of amount of retention, as stated in the PCC is reached.
- 46.2 Upon the issue of a Certificate of Completion of the Works by the Project Supervisor, in accordance with GCC 54.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Supervisor has certified that all Defects notified by the Project Supervisor to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" Bank guarantee.
- 47. Liquidated Damages

47.1 The Contractor shall pay liquidated damages to the Employer at the rate per day **stated in the PCC** for each day that the

The sum of the two coefficients A and B should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulae for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.15) to take account of fixed cost elements or other nonadjustable components.

Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount **defined in the PCC.** The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

47.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Supervisor shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause **41.1**.

48. Bonus

48.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day **stated in the PCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Supervisor shall certify that the Works are complete, although they may not be due to be complete.

49. Advance Payment

- 49.1 The Employer shall make advance payment to the Contractor of the amounts stated in the PCC by the date stated in the PCC, against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance payment has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.
- **49.2** The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Supervisor.
- **49.3** The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

50. Securities

50.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount, specified in the PCC, and in the form of unconditional bank guarantee issued by a commercial bank, authorized to issue the bank guarantee for the purpose and registered in China, acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date twenty eight (28) days from the date of issue of the Certificate of Completion.

51. Provisional Sums

- **Trovisional Sum" means a sum included in the Contract and so designated in the Bill of Quantities or Activities Schedule for the execution of any part of the Works or for the supply of goods, materials, Plans or services, or for contingencies, which sum may be used, in whole or in part, or not at all, on the instructions of the Project Supervisor. The Contractor shall be entitled to only such amount in respect of the works, supply or contingencies to which such Provisional Sums relate as the Project Supervisor shall determine in accordance with this Clause. The Project Supervisor shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.
- 51.2 In respect of every Provisional Sum the Project Supervisor shall have authority to issue instructions for the execution of work or for the supply of goods, materials, Plant or services by the Contractor, in which case the Contractor shall be entitled to an amount equals to the value thereof determined in accordance with Sub-Clause 38.3 or Sub-Clause 42.2.
 - **51.3** The Contractor shall prepare and provide to the Project Supervisor all quotations, invoices, vouches and accounts or receipt in connection with expenditure in respect of Provisional Sums, except where work is valued in accordance with rates or prices set out in the Bid.

52. Dayworks

- **52.1** If applicable, the Dayworks rates in the Contractor's Bid shall be used only when the Project Supervisor has given written instructions in advance for additional work to be paid for in that way.
 - **52.2** All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Supervisor. Each completed form shall be verified and signed by the Project Supervisor within two days of the work being done.

52.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms.

53. Cost of Repairs

53.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

54. Completion

54.1 The Contractor shall request the Project Supervisor to issue a Certificate of Completion of the Works, and the Project Supervisor shall do so upon deciding that the whole of the Works is completed.

55. Taking Over

55.1 The Employer shall take over the Site and the Works within seven days of the Project Supervisor's issuing a certificate of Completion.

56. Final Account

56.1 The Contractor shall supply the Project Supervisor with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Supervisor shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within fifty six (56) days of receiving the Contractor's account if it is correct and complete. If it is not, the Project Supervisor shall issue within fifty six (56) days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Supervisor shall decide on the amount payable to the Contractor and issue a payment certificate.

57. Operating and Maintenance Manuals

- and 57.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the PCC.
 - 57.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the PCC pursuant to GCC Sub-Clause 57.1, or they do not receive the Project Supervisor's approval, the Project Supervisor shall withhold the amount stated in the PCC from payments due to the Contractor.

58. Termination

- **58.1** The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- **58.2** Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- 1) the Contractor stops work for twenty eight (28) days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Supervisor;
- 2) the Project Supervisor instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 28 days;
- 3) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- a payment certified by the Project Supervisor is not paid by the Employer to the Contractor within 84 days of the date of the Project Supervisor's certificate;
- 5) the Project Supervisor gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Supervisor;
- **6)** the Contractor does not maintain a Security, which is required;
- 7) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the PCC; or
- 8) if the Contractor, in the judgment of the Employer, has engaged in corrupt or fraudulent practices in competing for or in executing the Contract, pursuant to GCC Clause 59.1.
- **58.3** When either party to the Contract gives notice of a breach of Contract to the Project Supervisor for a cause other than those listed under GCC Sub-Clause 58.2 above, the Project Supervisor shall decide whether the breach is fundamental or not.
- **58.4** Notwithstanding the above, the Employer may terminate the Contract for convenience.
- **58.5** If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

59. Corrupt Fraudulent Practices

and 59.1 If the Employer determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of Clause 58 shall apply as if such

- expulsion had been made under Sub-Clause 58.5, Termination by Employer.
- 59.2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 9.
- 59.3 Fraud and corruption are **defined in the PCC**.

Termination

- **60. Payment upon 60.1** If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Supervisor shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the PCC. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
 - **60.2** If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Supervisor shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

61. Property

61.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor's default.

62. Release from **Performance**

62.1 If the Contract is frustrated by any event entirely outside the control of either the Employer or the Contractor, the Project Supervisor shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

63. Suspension of **Bank Loan**

- **63.1** In the event that the Bank suspends the Loan to the Employer, from which part of the payments to the Contractor are being made:
 - The Employer is obligated to notify the Contractor of such a) suspension within seven (7) days of having received the Bank's suspension notice.

b) If the Contractor has not received sums due it within the Twenty-Eight (28) days for payment provided for in Sub-Clause 41.1, the Contractor may immediately issue a Fourteen (14) day termination notice.

64. Miscellaneous to the contractor

Refer to Section VIII Particular Conditions of Contract

Section VIII. Particular Conditions of Contract

Except where otherwise indicated, all PCC should be filled in by the Employer prior to issuance of the Bidding Documents. Schedules and reports to be provided by the Employer should be annexed.

A. General	
GCC 1.1 (d)	The financing institution is: <i>European Investment Bank</i> ¹¹⁶
GCC 1.1 (s)	The Employer is Heilongjiang WeishengBuilding energy conservation engineering co., LTD ¹¹⁷
GCC 1.1 (x)	The Intended Completion Date for the whole of the Works shall be, 2016 (to fill in the date prior to issuance to bidders)
GCC 1.1 (bb)	The Project Supervisor: to be selected.
GCC 1.1 (ee)	The Site is located at <i>Harbin, Heilongjiang</i> ¹²⁰ . <i>Please refer to draft for details if any, the draft provided during the construction</i> ¹²¹ .
GCC 1.1 (hh)	The Start Date shall be122. (to fill in the date prior to issuance to bidders)
GCC 1.1 (II)	The Works consist of <i>heating Meter Installation and Well Construction</i> .
GCC 2.2	Sectional Completions are: no
GCC 2.3(i)	The following documents also form part of the Contract: no
GCC 5.1	The representative of the Employer <i>may not</i> delegate any of his duties and responsibilities.
GCC 8.1	Schedule of other contractors: <i>not applicable.</i>
GCC 14.1	The other insurance shall be: (i) the employees of the contractor The lowest amount of insurance: <i>RMB 400,000.00</i>
	Deductible excess RMB 1000
GCC 15.1	Site Data are: Not applicable
GCC 21.1	The Site Possession Date(s) shall be: seven (7) days upon signing of the contract

CCC 25 4	Aubitantian anno inician anno ad bu bath a mutica ab all ba China International		
GCC 25.4	Arbitration commission agreed by both parties shall be China International Economic and Trade Arbitration Commission.		
	Place of arbitration: Harbin		
	B. Time Control		
GCC 26.1	The Contractor shall submit for approval a Program for the Works within seven (7) days from the date of the Letter of Acceptance.		
GCC 26.3	The period between Program updates is seven (7) days.		
	The amount to be withheld for late submission of an updated Program is <i>RMB 5000</i> .		
	C. Quality Control		
GCC 34.1	The Defects Liability Period is: one (1) year.		
	The Defects Liability Period is issued by" Building Construction Engineering quality warranty measure" Decree 80, Ministry of Rural Housing and construction, P.R.C, should be responsible for the loss of the employer due to the problem of Engineering quality in the Defects liability Period.		
GCC 34.2	Every time notice of a Defect is given, the Contractor shall correct the notified Defect within 24 hours.		
	D. Cost Control		
GCC 45.1	The Contract is not subject to price adjustment		
GCC 46.1	The retention is 5% of the contract amount		
	10 days before the contractor enter the project site, 30% down payment will be paid, upon the inspection and acceptance of the project, 65% will be paid, after warranty period without any quality problem, 5%will be paid		
GCC 47.1	The liquidated damages for the whole of the Works are <i>RMB 3000 per day</i> . The maximum amount of liquidated damages for the whole of the Works is <i>1% of the final Contract Price</i> .		
GCC 48.1	The Bonus for the whole of the Works is RMB 3000 per day. The maximum amount of Bonus for the whole of the Works is 1% of the final Contract Price.		
GCC 49.1	The Advance Payments shall be: 30%, upon receiving the Contractor's		

	advance payment guarantee within 30 days after the effectiveness of the contract	
GCC 50.1	The Performance Security amount is:10%	
E. Finishing the Contract		
GCC 57.1	The date by which operating and maintenance manuals are required is within 10 days after the completion of installation.	
GCC 57.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required in GCC 58.1 is <i>RMB 5000 per set</i> .	

GCC 58.2 (g)	The maximum number of days is: 30 days	
GCC 59	For the European Investment Bank financed contracts, the following succlause shall be inserted	
	59.3 For the purposes of this Sub-Clause:	
	(i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;	
	(ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;	
	(iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;	
	(iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;	
	(v) "obstructive practice" is	
	(aa)deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede an Employer investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or	
	(bb) acts intended to materially impede the exercise of the European Investment Bank's inspection and audit rights provided for under Sub-Clause 23.2.	
GCC 64	1. The contractor shall establish and implement proper HSE policy and coordinate with local households and other construction contractors without any attempt to cut corners. The contractor shall pay the employer liquidated damages if it commits any of the following actions.	
	1) Any industrial accidents including casualties or fire occur due to improper or insufficient safety measures, in which case the amount of liquidated damages payable shall be the value of direct loss resulting from such accidents;	
	2) Failure to remove the building debris in time, for which 100.00 Yuan shall be paid	

per day of delay and per occasion.

- 3) If the contractor-purchased materials are found nonconforming through spot check by the employer, the contractor shall pay for the costs of such spot check and replace the nonconforming materials with conforming materials. If construction activities have been completed before such spot check, the nonconforming deliverables shall be dismantled in entirety. Meanwhile, the contractor shall pay the employer liquidated damages in an amount of the price of nonconforming materials and compensate the employer for any losses and reputational loss so incurred. Material loss resulting from poor workmanship shall be the sole responsibility of the contractor.
- 4) Failure to promptly repair any damage to the public facilities on the project site due to improper construction activities or any resident compliant resulting from improper treatment, in which case the contractor shall immediately act and compensate the affected residents for actual losses to the satisfaction of affected residents. In addition to compensation, the contractor shall pay liquidated damages in the amount of such compensation.
- 5) If two complaints occur due to the same failure, the contractor shall pay liquidated damages in an amount of two times the amount of compensation in addition to compensation for actual losses. More than two complaints shall be dealt with by that analogy.
- 6) If the deliverables don't meet the quality requirements, the contractor shall immediately make corrections at its sole costs. If the quality requirements can not be met after two attempts to make correction for the same quality defect, the contractor shall pay liquidate damages in an amount of two times the resulting costs of correction in addition to paying such resulting costs. More than two nonconformities shall be dealt with by that analogy.
- 7) If the contractor fails to make correction on site within 24 hours of receipt of any complaint about quality defect during the warranty period, the employer has the right to have another service provider make such correction, at the sole costs of the contractor, in which case the contractor shall pay the employer liquidated damages in an amount of the costs of repair.
- 8) If any dispute occurs between the contractor and residents or other construction contractors due to the fault of the contractor, the employer will determine the amount of liquidated damages at its sole discretion in light of physical circumstances.

2. Other covenants:

- 1) The contractor shall designate an onsite representative and provide the contact details about such representative:
- 2) The contractor shall provide Employer with true, valid and complete paperwork upon completion of the project.
- 3) The contractor may not subcontract this project in any manner, otherwise the employer has the right to terminate this contract and The contractor shall compensate The employer for any and all losses so incurred.

Section IX - Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

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Letter of Acceptance

[on letterhead paper of the Employer]

	[date]
To: [name and address of the Contractor]	
Subject: [Notification of Award Contract No]	
This is to notify you that your Bid dated [insert date] . the for the Accepted Contract Amou of	as given in the Appendix to ant of the equivalent rency], as corrected and
You are requested to furnish the Performance Security within with the Conditions of Contract, using for that purpose the of th Form included in Section IX (Contract Forms) of the Bidding Docu	e Performance Security
[Choose one of the following statements:]	
We accept that[insert the name of the Bidder] be appointed as the Adjudicator.	of Adjudicator proposed by
[or]	
We do not accept that	sending a copy of this[insert name of ereby requesting such
Authorized Signature:	
Name and Title of Signatory:	

Name of Agency:	

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the day	of , between
[name of the Employer] (hereina	fter "the Employer"), of the one part, and \dots
Iname of the Contractor] (hereinafter "	the Contractor"), of the other part:

The Employer and the Contractor agree as follows:

- 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
- 2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
 - the Letter of Acceptance
 - the Bid
 - the Addenda Nos [insert addenda numbers if any]. . . .
 - the Particular Conditions
 - the General Conditions;
 - the Specification
 - the Drawings; and
 - the completed Schedules,

3.In consideration of the payments to be made by the Employer to the Contractor as indicated in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4.The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of [name of the borrowing country]. . . . on the day, month and year indicated above.

Signed by:	Signed by:
for and on behalf of the Employer	for and on behalf the Contractor
in the	in the
presence of:	presence of:
Witness, Name, Signature, Address, Date	Witness, Name, Signature, Address, Date

Performance Security

(The bank that issues Performance Security shall present the Bank Guarantee in the Form in accordance with the instructions indicated below and issue such a Bank Guarantee under the official letterhead and with the official reference number of the issuing bank)

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary:[Name and Address of Employer]
Date:
Performance Guarantee No.:
We have been informed that [name of the Contractor] (hereinafter called "the Contractor") has entered into Contract No [reference number of the Contract] dated with you, for the execution of [name of contract and brief description of Works] (hereinafter called "the Contract").
Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.
At the request of the Contractor, we [name of the Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [name of the currency and amount in figures] 1 ([amount in words]) such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.
This guarantee shall expire, no later than the Day of , ² , and any demand for payment under it shall be received by us at this office on or before that date.
[Seal of Bank and Signature(s)]

Note -

All italicized text is for guidance on how to prepare this demand guarantee and shall be deleted from the final document.

The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract and denominated in Chinese Renminbi.

Insert the date twenty-eight days after the expected completion date. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request shall be in writing and shall be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Advance Payment Security

[The bank that issues Advance Payment Security for Advance Payment shall present the Bank Guarantee in the Form in

accordance with the instructions indicated below and issue such a Bank Guarantee under the official letterhead and with the official reference number of the issuing bank.]

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary:	[Name and Address of Employer]
Date:	
Advance Payment Guarant	tee No.:
We have been informed t	hat <i>[name of the Contractor]</i> (hereinafter called "the
•	into Contract No [reference number of the Contract]
dated with you, Works] (hereinafter ca	for the execution of <i>[name of contract and brief description of</i> alled "the Contract").
	nd that, according to the Conditions of the Contract, an advance $[name\ of\ the\ currency\ and\ amount\ in\ figures]^1,[$

At the request of the Contractor, we [name of the Bank]. . . . hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [name of the currency and amount in figures]*. (. [amount in words]. . . .) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than the costs of mobilization in respect of the Works.

words]. . . .) is to be made against an advance payment guarantee.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above shall have been received by the Contractor on its

account number [Contractor's account number]. at [name and address of the Bank].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that eighty (80) percent of the Contract Price has been certified for payment, or on the . . . day of , whichever is earlier. Consequently, any demand for payment under this guarantee shall be received by us at this office on or before that date.

 Seal of Bank and Signature(s)]
 [a , - a a a

Note –

All italicized text is for guidance on how to prepare this demand guarantee and shall be deleted from the final document.

- 1 The Guarantor shall insert an amount representing the amount of the advance payment denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.
- 2 Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request shall be in writing and shall be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.