STANDARD PROCUREMENT DOCUMENT

Request for Bids
Goods

(Two-Envelope Bidding Process)

SUPPLY OF SMART METERS

№: KG/KEMS/G/2025/RFB-03-1

Project: Electricity Sector Modernization and Sustainability Project

Purchaser: Ministry of Energy of Kyrgyz Republic

July 28, 2025

THE WORLD BANK
IBRD • IDA

March 2025

Specific Procurement Notice
Template

Request for Bids
Goods

(Two-Envelope Bidding Process)

Country: Kyrgyz Republic
Name of Project: Electricity Sector Modernization and Sustainability Project
Contract Title: Supply of Smart Meters
Credit No.: *7147-KG*
Grant No.: *E069-KG; TF B9767-KG*
RFB Reference No.: *KG/KEMS/G/2025/RFB-03-1*

1. The Kyrgyz Republic has received financing from the World Bank toward the cost of the Electricity Sector Modernization and Sustainability Project, and intends to apply part of the proceeds toward payments under the contract for the Supply of Smart Meters. For this contract, the Borrower shall process the payments using the Direct Payment disbursement method, as defined in the World Bank's Disbursement Guidelines for Investment Project Financing, except for those payments, which the contract provides to be made through letter of credit.

2. The Ministry of Energy of Kyrgyz Republic now invites sealed Bids from eligible Bidders for *the* Supply of Smart Meters.

3. Bidding will be conducted through international competitive procurement using a Request for Bids (RFB) as specified in the World Bank's "Procurement Regulations for IPF Borrowers" *November 2020* ("Procurement Regulations"), and is open to all eligible Bidders as defined in the Procurement Regulations.

   The Bidders' qualification requirements are mentioned in Section-III of this document which include the below. In case of any discrepancy between the clauses refer here and as in Section-III, the later shall prevail:

   (a) **Financial Capability**: The Bidder shall submit audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Purchaser, for **the last 3 (three) years (2022, 2023, 2024)** prior to bid submission deadline, demonstrating the current soundness of the Bidder's financial position. For a joint venture, this requirement shall be met by each member:

(b) **Specific Experience:** The Bidder shall demonstrate that it has successfully completed at least *2 of contracts* within the last 5 years prior to bid submission deadline, total with a value of at least USD 12,000,000, that have been successfully and substantially completed and that are similar in nature and complexity to the Goods and Related Services under the Contract. Contracts considered similar in nature and complexity shall include the supply, delivery, installation, and/or commissioning of Advanced Metering Infrastructure (AMI), Automated Meter Reading (AMR), or smart electricity metering systems, including associated software and communication components. For a joint venture, this requirement may be met by all members combined.

4. Bids will be evaluated in accordance with the evaluation process set out in the bidding documents. The following weightings shall apply for Rated Criteria (including technical and non-price factors): [60%] and for Bid cost: [40%].

5. Interested eligible Bidders may obtain further information from *Ministry of Energy, Project Management Office, Director – Guljigit Murzakarimov, E-mail:* murzakarimovg@gmail.com and kems.procur@gmail.com and inspect the bidding document during office hours *09:00 to 18:00* at the address given below.

6. The bidding document in English and/or Russian languages may be obtained by interested eligible Bidders upon the submission of a written application to the address below. The document will be sent by e-mail in PDF format.

7. Bids must be delivered to the address below on or before ***16:00 (Bishkek time) on September 15, 2025***. Electronic Bidding ***will not be permitted***. Late Bids will be rejected. The outer Bid envelopes marked "ORIGINAL BID", and the inner envelopes marked "TECHNICAL PART" will be publicly opened in the presence of the Bidders' designated representatives and anyone who chooses to attend, at the address below on ***16:00 (Bishkek time) on September 15, 2025***. All envelopes marked "SECOND ENVELOPE: FINANCIAL PART" shall remain unopened and will be held in safe custody of the Purchaser until the second public opening.

8. All Bids must be accompanied by a *Bid Security* of **US$200,000 (two hundred thousand)** or equivalent in freely-convertible currency.

9. Attention is drawn to the Procurement Regulations requiring the Borrower to disclose information on the successful bidder's beneficial ownership, as part of the Contract Award Notice, using the Beneficial Ownership Disclosure Form as included in the bidding document.

10. The address(es) referred to above is (are):

Electricity Sector Modernization and Sustainability Project
Ministry of Energy of Kyrgyz Republic
Guljigit Murzakarimov – Director of the Project Management Office
720040 – 326 Jibek-Joly av., Bishkek, Kyrgyz Republic,
E-mail: murzakarimovg@gmail.com and kems.procur@gmail.com

Standard Procurement Document

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Section I - Instructions to Bidders

A. General

1. **Scope of Bid**

1.1 In connection with the Specific Procurement Notice, Request for Bids (RFB), specified **in the Bid Data Sheet (BDS),** the Purchaser, as specified **in the BDS,** issues this bidding document for the supply of Goods and, if applicable, any Related Services incidental thereto, as specified in Section VII, Schedule of Requirements. The name, identification and number of lots (contracts) of this RFB are specified **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, including, if **specified in the BDS**, distributed or received through the electronic-procurement system used by the Purchaser), with proof of receipt;

(b) if the context so requires, "singular" means "plural" and vice versa; and

(c) "Day" means calendar day, unless otherwise specified as "Business Day". A Business Day is any day that is an official working day of the Borrower. It excludes the Borrower's official public holidays.

2. Source of Funds

2.1 The Borrower or Recipient (hereinafter called "Borrower") specified **in the BDS** has applied for or received financing (hereinafter called "funds") from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called "the Bank") in an amount specified **in the BDS,** toward the project named **in the BDS.** The Borrower intends to apply a portion of the funds to eligible payments under the contract for which this bidding document is issued.

2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the

Bank in accordance with the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3. Fraud and Corruption

3.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Section VI, Fraud and Corruption.

3.2 In further pursuance of this policy, bidders shall permit and shall cause their agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit the Bank to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, bid submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. Eligible Bidders

4.1 A Bidder may be a firm that is a private entity, a state-owned enterprise or institution (subject to ITB 4.6), or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the Bidding process and, in the event the JV is awarded the Contract, during contract execution. Unless specified **in the BDS**, there is no limit on the number of members in a JV.

4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this Bidding process, if the Bidder:

(a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or

(b) receives or has received any direct or indirect subsidy from another Bidder; or

(c) has the same legal representative as another Bidder; or

(d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the Bid of another Bidder, or influence the decisions of the Purchaser regarding this Bidding process; or

(e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or

(f) or any of its affiliates has been hired (or is proposed to be hired) by the Purchaser or Borrower for the Contract implementation; or

(g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS reference ITB 2.1 (the name of the project), that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or

(h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding document or specifications of the Contract, and/or the

Bid evaluation process of such Contract; or (ii) would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the Bidding process and execution of the Contract.

4.3 A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a subcontractor. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member, may participate as a subcontractor in more than one Bid.

4.4 A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.8. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of the Contract including related Services.

4.5 A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Anti-Corruption Guidelines, and in accordance with its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework as described in Section VI paragraph 2.2 d. shall be ineligible to be prequalified for, initially selected for, bid for, propose for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address specified in the BDS.

4.6 Bidders that are state-owned enterprises or institutions in the Purchaser's Country may be eligible to compete and be awarded a Contract(s)

only if they can establish, in a manner acceptable to the Bank, that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Purchaser.

4.7 A Bidder shall not be under suspension from Bidding by the Purchaser as the result of the operation of a Bid–Securing Declaration or Proposal-Securing Declaration.

4.8 Firms and individuals may be ineligible if so indicated in Section V, Eligible Countries, and:

(a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or 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, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.

4.9 A Bidder shall provide such documentary evidence of eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.

4.10 A firm that is under a sanction of debarment by the Borrower from being awarded a contract is eligible to participate in this procurement, unless the Bank, at the Borrower's request, is satisfied that the debarment;

(a) relates to fraud or corruption; and

(b) followed a judicial or administrative proceeding that afforded the firm adequate due process.

5. Eligible Goods and Related Services

5.1 All the Goods and Related Services to be supplied under the Contract and financed by the Bank may have their origin in any country in accordance with Section V, Eligible Countries.

5.2 For purposes of this ITB, the term "goods" includes commodities, raw material, machinery,

equipment, and industrial plants; and "related services" includes services such as insurance, installation, training, and initial maintenance.

5.3 The term "origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of Request for Bids Document

6. Sections of Bidding Document

6.1 The bidding document consist of Parts 1, 2, and 3, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB 8.

PART 1 Bidding Procedures

- Section I - Instructions to Bidders (ITB)
- Section II - Bidding Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV - Bidding Forms
- Section V - Eligible Countries
- Section VI - Fraud and Corruption

PART 2 Supply Requirements

- Section VII - Schedule of Requirements

PART 3 Contract

- Section VIII - General Conditions of Contract
- Section IX - Special Conditions of Contract
- Section X - Contract Forms

6.2 The Specific Procurement Notice - Request for Bids (RFB) issued by the Purchaser is not part of this bidding document.

6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for

clarification, the Minutes of the pre-Bid meeting (if any), or addenda to the bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding document and to furnish with its Bid all information or documentation as is required by the bidding document.

7. Clarification of the Bidding Document

7.1 A Bidder requiring any clarification of the bidding document shall contact the Purchaser in writing at the Purchaser's address specified **in the BDS**. The Purchaser 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 specified **in the BDS.** The Purchaser shall forward copies of its response to all Bidders who have acquired the bidding document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so specified **in the BDS**, the Purchaser shall also promptly publish its response at the web page identified **in the BDS**. Should the clarification result in changes to the essential elements of the bidding document, the Purchaser shall amend the bidding document following the procedure under ITB 8 and ITB 22.2.

8. Amendment of Bidding Document

8.1 At any time prior to the deadline for submission of Bids, the Purchaser may amend the bidding document by issuing addenda.

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 Purchaser in accordance with ITB 6.3. The Purchaser shall also promptly publish the addendum on the Purchaser's web page in accordance with ITB 7.1.

8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Purchaser may, at its

discretion, extend the deadline for the submission of Bids, pursuant to ITB 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 Purchaser shall not 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 Purchaser, shall be written in the language specified **in the BDS.** 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 into the language specified **in the BDS,** in which case, for purposes of interpretation of the Bid, such translation shall govern.

11. Documents comprising Bid

11.1 The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously in two separate sealed envelopes (two-envelope Bidding process). One envelope shall contain only information relating to the Technical Part and the other, only information relating to the Financial Part. These two envelopes shall be enclosed in a separate sealed outer envelope marked "ORIGINAL BID".

11.2 The **Technical Part** shall contain the following:

(a) **Letter of Bid - Technical Part:** prepared in accordance with ITB 12;

(b) **Bid Security** or **Bid-Securing Declaration**: in accordance with ITB 19.1;

(c) **Alternative Bid - Technical Part**: if permissible in accordance with ITB 13, the Technical Part of any Alternative Bid;

(d) **Authorization**: written confirmation authorizing the signatory of the Bid to

commit the Bidder, in accordance with ITB 20.3;

(e) **Bidder's Eligibility**: documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to Bid;

(f) **Qualifications**: documentary evidence in accordance with ITB 17 establishing the Bidder's qualifications to perform the Contract if its Bid is accepted;

(g) **Eligibility of Goods and Related Services**: documentary evidence in accordance with ITB 16, establishing the eligibility of the Goods and Related Services to be supplied by the Bidder;

(h) **Conformity**: documentary evidence in accordance with ITB 16, that the Goods and Related Services conform to the bidding document;

(i) any other document **required in the BDS.**

11.3 The **Financial Part** envelope shall contain the following:

(a) **Letter of Bid – Financial Part:** prepared in accordance with ITB 12 and ITB 14;

(b) **Price Schedules**: completed prepared in accordance with ITB 12 and ITB 14;

(c) **Alternative Bid - Financial Part;** if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid;

(d) any other document **required in the BDS.**

11.4 The Technical Part shall not include any financial information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part the Bid shall be declared non-responsive.

11.5 In addition to the requirements under ITB 11.2, Bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and

submitted with the Bid, together with a copy of the proposed Agreement.

11.6 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Letters of Bid

12.1. The Bidder shall prepare the Letter of Bid – Technical Part, and Letter of Bid – Financial Part using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.3. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

13.1. Unless otherwise **specified in the BDS,** Alternative Bids shall not be considered.

14. Bid prices and Discounts

14.1 The prices and discounts quoted by the Bidder in the Letter of Bid - Financial Part and in the Price Schedules shall conform to the requirements specified below.

14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.

14.3 The price to be quoted in the Letter of Bid - Financial Part, in accordance with ITB 12.1 shall be the total price of the Bid, excluding any discounts offered.

14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid - Financial Part, in accordance with ITB 12.1.

14.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, unless otherwise specified **in the BDS.** A Bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 31. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a Bid submitted with a fixed price

quotation shall not be rejected, but the price adjustment shall be treated as zero.

14.6 If so specified in ITB 1.1, Bids are being invited for individual lots (contracts) or for any combination of lots (packages). Unless otherwise specified **in the BDS,** prices quoted shall correspond to 100% of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer discounts 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. **However, discounts that are conditional on the award of more that one lot will not be considered for bid evaluation purpose**.

14.7 The terms EXW, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, as specified **in the BDS.**

14.8 Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms. The disaggregation of price components is required solely for the purpose of facilitating the comparison of Bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V, Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V, Eligible Countries. Prices shall be entered in the following manner:

(a) For Goods manufactured in the Purchaser's Country:

(i) the price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the

components and raw material used in the manufacture or assembly of the Goods;

(ii) any Purchaser's Country sales tax and other taxes which will be payable on the Goods if the Contract is awarded to the Bidder; and

(iii) the price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) specified **in the BDS.**

(b) For Goods manufactured outside the Purchaser's Country, to be imported:

(i) the price of the Goods, quoted CIP named place of destination, in the Purchaser's Country, as specified **in the BDS;**

(ii) the price for inland transportation, insurance, and other local services required to convey the Goods from the named place of destination to their final destination (Project Site) specified **in the BDS;**

(c) For Goods manufactured outside the Purchaser's Country, already imported:

(i) the price of the Goods, including the original import value of the Goods; plus any mark-up (or rebate); plus any other related local cost, and custom duties and other import taxes already paid or to be paid on the Goods already imported.

(ii) the custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported;

(iii) the price of the Goods, obtained as the difference between (i) and (ii) above;

(iv) any Purchaser's Country sales and other taxes which will be payable on

the Goods if the Contract is awarded to the Bidder; and

(v) the price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) specified **in the BDS.**

(d) for Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in the Schedule of Requirements:

(i) the price of each item comprising the Related Services (inclusive of any applicable taxes).

15. Currencies of Bid and Payment

15.1 The currency(ies) of the Bid and the currency(ies) of payments shall be the same. The Bidder shall quote in the currency of the Purchaser's Country the portion of the Bid price that corresponds to expenditures incurred in the currency of the Purchaser's country, unless otherwise specified **in the BDS.**

15.2 The Bidder may express the Bid price in any currency. If the Bidder wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly but shall use no more than three foreign currencies in addition to the currency of the Purchaser's Country.

16. Documents Establishing the Eligibility and Conformity of the Goods and Related Services

16.1 To establish the eligibility of the Goods and Related Services in accordance with ITB 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.

16.2 To establish the conformity of the Goods and Related Services to the bidding document, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.

16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a

detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.

16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period specified **in the BDS** following commencement of the use of the goods by the Purchaser.

16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.

17. Documents Establishing the Eligibility and Qualifications of the Bidder

17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid – Technical Part, included in Section IV, Bidding Forms.

17.2 The documentary evidence of the Bidder's qualifications to perform the Contract, if its Bid is accepted, shall establish to the Purchaser's satisfaction:

(a) that, if required **in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods

to supply these Goods in the Purchaser's Country;

(b) that, if required **in the BDS**, in case of a Bidder not doing business within the Purchaser's Country, the Bidder is or will be (if awarded the Contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and

(c) that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.

18. Period of Validity of Bids

18.1. Bids shall remain valid until the date **specified in the BDS** or any extended date if amended by the Purchaser in accordance with ITB 8. A Bid that is not valid until the date **specified in the BDS**, or any extended date if amended by the Purchaser in accordance with ITB 8, shall be rejected by the Purchaser as nonresponsive.

18.2. In exceptional circumstances, prior to the expiry of the Bid validity, the Purchaser 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 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 18.3.

18.3. 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 determined as follows:

(a) In the case of fixed price contracts, the Contract price shall be the Bid price adjusted by the factor **specified in the BDS**.

(b) In the case of adjustable price contracts, no adjustment shall be made.

(c) In any case, Bid evaluation shall be based on the Bid price without taking into

consideration the applicable correction from those indicated above.

19. Bid Security

19.1. The Bidder shall furnish, as part of the Technical Part of its Bid, either a Bid-Securing Declaration or a Bid Security, as specified **in the BDS,** in original form and, in the case of a Bid security**,** in the amount and currency specified **in the BDS.**

19.2. A Bid Securing Declaration shall use the form included in Section IV, Bidding Forms.

19.3. If a Bid Security is specified pursuant to ITB 19.1, the Bid security shall be a demand guarantee in any of the following forms at the Bidder's option:

(a) an unconditional guarantee issued by a bank or non-bank financial institution (such as an insurance, bonding or surety company);

(b) an irrevocable letter of credit;

(c) a cashier's or certified check; or

(d) another security **specified in the BDS**,

from a reputable source from an eligible country. If an unconditional guarantee is issued by a non-bank financial institution located outside the Purchaser's Country the issuing non-bank financial institution shall have a correspondent financial institution located in the Purchaser's Country to make it enforceable unless the Purchaser has agreed in writing, prior to Bid submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Purchaser prior to Bid submission. The Bid security shall be valid for twenty-eight (28) days beyond the original date of expiry of the Bid validity, or beyond any extended date if requested under ITB 18.2.

19.4. If a Bid Security is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.

19.5. If a Bid Security is specified pursuant to ITB 19.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB 49.

19.6. 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.

19.7. The Bid Security may be forfeited:

(a) if a Bidder withdraws its Bid prior to the expiry date of Bid validity specified by the Bidder on the Letter of Bid or any extended date provided by the Bidder ; or

(b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB 48; or

(ii) furnish a performance security in accordance with ITB 49.

19.8. The Bid Security or Bid-Securing Declaration of a JV must be in the name of the JV that submits the Bid. If the JV has not been legally constituted into a legally enforceable JV at the time of Bidding, the Bid security or Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.5.

19.9. If a Bid security is **not required in the BDS**, pursuant to ITB 19.1, and

(a) if a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Letter of Bid, or any extended date provided by the Bidder, or

(b) if the successful Bidder fails to: sign the Contract in accordance with ITB 48; or furnish a performance security in accordance with ITB 49;

the Borrower may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a

contract by the Purchaser for a period of time **as stated in the BDS**.

20. Format and Signing of Bid

20.1 The Bidder shall prepare the Bid, in accordance with ITB 11 and ITB 21.

20.2 Bidders shall mark as "CONFIDENTIAL" information in their Bids which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

20.3 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. All pages of the Bid where entries or amendments have been made shall be signed or initialed by the person signing the Bid.

20.4 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

20.5 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission of Bids

21. Sealing and Marking of Bids

21.1 The Bidder shall deliver the Bid in two separate, sealed **envelopes** (the Technical Part and the Financial Part). These two envelopes shall be enclosed in a sealed outer envelope marked "ORIGINAL BID".

21.2 In addition, the Bidder shall submit copies of the Bid in the number specified **in the BDS**. Copies of the Technical Part shall be placed in a separate sealed envelope marked "COPIES: TECHNICAL PART". Copies of the Financial Part shall be placed in a separate sealed envelope marked "COPIES: FINANCIAL PART". The Bidder shall place both of these envelopes in a separate, sealed outer envelope

marked "BID COPIES". In the event of any discrepancy between the original and the copies, the original shall prevail. If alternative Bids are permitted in accordance with ITB 13, the alternative Bids shall be submitted as follows: the original of the alternative Bid Technical Part shall be placed in a sealed envelope marked "ALTERNATIVE BID – TECHNICAL PART" and the Financial Part shall be placed in a sealed envelope marked "ALTERNATIVE BID – FINANCIAL PART" and these two separate sealed envelopes then enclosed within a sealed outer envelope marked "ALTERNATIVE BID – ORIGINAL", the copies of the alternative Bid will be placed in separate sealed envelopes marked "ALTERNATIVE BID – COPIES OF TECHNICAL PART", and "ALTERNATIVE BID – COPIES OF FINANCIAL PART" and enclosed in a separate sealed outer envelope marked "ALTERNATIVE BID - COPIES".

21.3 The envelopes marked "ORIGINAL BID" and "BID COPIES" (and, if appropriate, a third envelope marked "ALTERNATIVE BID") shall be enclosed in a separate sealed outer envelope for submission to the Purchaser.

21.4 All inner and outer envelopes, shall:

(a) bear the name and address of the Bidder;

(b) be addressed to the Purchaser in accordance with ITB 22.1;

(c) bear the specific identification of this Bidding process indicated in ITB 1.1; and

(d) bear a warning not to open before the time and date for Bid opening.

21.5 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the Bid.

22. Deadline for Submission of Bids

22.1. Bids must be received by the Purchaser at the address and no later than the date and time specified **in the BDS.** When so specified **in the BDS**, Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids

electronically shall follow the electronic Bid submission procedures specified **in the BDS**.

22.2. The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the bidding document in accordance with ITB 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

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

24. Withdrawal, Substitution, and Modification of Bids

24.1. A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization (the power of attorney) in accordance with ITB 20.3, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be:

(a) prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION;" and

(b) received by the Purchaser prior to the deadline prescribed for submission of Bids, in accordance with ITB 22.

24.2. Bids requested to be withdrawn in accordance with ITB 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 -Technical Part and repeated in

the Letter of Bid - Financial Part, or any extension thereof.

E. Public Opening of Technical Parts of Bids

25. Public Opening of Technical Parts of Bids

25.1. Except as in the cases specified in ITB 23 and ITB 24.2, the Purchaser shall, at this Bid opening, publicly open and read out, in accordance with this ITB, all bids received by the deadline at the date, time and place specified **in the BDS** in the presence of Bidders' designated representatives and anyone who chooses to attend. Any specific electronic Bid opening procedures required if electronic Bidding is permitted in accordance with ITB 22.1, shall be as specified **in the BDS.**

25.2. First, the written notice of withdrawal in the 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.

25.3. Next, envelopes marked "SUBSTITUTION" shall be opened and read out 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 at Bid opening.

25.4. Next, envelopes marked "MODIFICATION" shall be opened and read out 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 at Bid opening. Only Bids that are opened and read out at Bid opening shall be considered further.

25.5. Next, all other envelopes marked "TECHNICAL PART" shall be opened one at a time. All envelopes marked "FINANCIAL PART" shall remain sealed, and kept by the Purchaser in safe custody until they are opened, at a later public opening, following the evaluation of the Technical Part of the Bids. On opening the envelopes marked "TECHNICAL PART" the Purchaser shall read out: the name of the Bidder and whether there is a modification; and Alternative Bid the presence or absence of a Bid Security, if required and any other details as the Purchaser may consider appropriate.

25.6. Only Technical Parts of Bids and Alternative Bid - Technical Parts that are read out at Bid opening shall be considered further in the evaluation. The Letter of Bid – Technical Part and the separate sealed envelope marked "FINANCIAL PART" are to be initialed by representatives of the Purchaser attending Bid opening in the manner specified **in the BDS.**

25.7. At the Bid opening the Purchaser shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with ITB 23.1).

25.8. Following the opening of the Technical Parts of the Bid the Purchaser shall prepare a record that shall include, as a minimum:

(a) the name of the Bidder and whether there is a withdrawal, substitution, or modification;

(b) the presence or absence of a duly sealed envelope marked "FINANCIAL PART";

(c) the presence or absence of a Bid Security or Bid-Securing Declaration; and

(d) if applicable, any Alternative Bid - Technical Part;

25.9. The Bidders' representatives who are present shall be requested to sign the record. The 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.

F. Evaluation of Bids - General Provisions

26. Confidentiality

26.1 Information relating to the evaluation of the Technical Part shall not be disclosed to Bidders or any other persons not officially concerned with the Bidding process until the notification of evaluation of the Technical Part in accordance with ITB 33. Information relating to the evaluation of Financial Part, the evaluation of combined Technical Part and Financial Part, and recommendation of contract award shall not be disclosed to Bidders or any other persons not officially concerned with the RFB process until the Notification of Intention to Award the Contract is transmitted to Bidders in accordance with ITB 43.

26.2 Any effort by a Bidder to influence the Purchaser in the evaluation or contract award decisions may result in the rejection of its Bid.

26.3 Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser 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, comparison of the Bids, and qualification of the Bidders, the Purchaser 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 Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, 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 Purchaser in the Evaluation of the Bids, in accordance with ITB 35.

27.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Purchaser'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

28.2 "Omission" is the failure to submit part or all of the information or documentation required in the bidding document.

29. Nonconformities, Errors and Omissions

29.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformities in the Bid.

29.2 Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

G. Evaluation of Technical Parts of Bids

30. Evaluation of Technical Parts

30.1 In evaluating the Technical Parts of each Bid, the Purchaser shall use the criteria and methodologies listed in ITB 31, ITB 32, the BDS, if applicable, and Section III, Evaluation and Qualification Criteria. No other evaluation criteria or methodologies shall be permitted.

31. Determination of Responsiveness

31.1 The Purchaser's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11. A substantially responsive Bid is one that meets the requirements of the bidding document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

(a) if accepted, would:

(i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or

(ii) limit in any substantial way, inconsistent with the bidding document, the Purchaser's rights or the Bidder's obligations under the Contract; or

(b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

31.2 The Purchaser shall examine the technical aspects of the Bid submitted in accordance with ITB 16 and ITB 17, in particular, to confirm that all requirements of Section VII, Schedule of Requirements have been met without any material deviation or reservation, or omission.

31.3 If a Bid is not substantially responsive to the requirements of bidding document, it shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

32. Qualification of the Bidders and Detailed Evaluation of the Technical Part

32.1 The Purchaser shall determine, to its satisfaction, whether all eligible Bidders, whose Bids have been determined to be substantially responsive to the bidding document, meet the Qualification Criteria specified in Section III, Evaluation and Qualification Criteria.

32.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than specialized subcontractors if permitted in the bidding document), or any other firm different from the Bidder.

32.3 Prior to Contract award, the Purchaser will verify that the successful Bidder (including each member of a JV) is not disqualified by the Bank due to noncompliance with contractual SEA/SH

prevention and response obligations. The Purchaser will conduct the same verification for each subcontractor proposed by the successful Bidder. If any proposed subcontractor does not meet the requirement, the Purchaser will require the Bidder to propose a replacement subcontractor.

32.4 Only substantially responsive bids submitted by eligible and qualified bidders shall proceed to the detailed technical evaluation to assess adequacy of the Technical Part followed by evaluation applying technical factors/subfactors and corresponding scores and weightings as specified in the BDS.

H. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts of Bids

33. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts

33.1 Following the completion of the evaluation of the Technical Parts of the Bids, and the Bank has issued its no objection (if applicable), the Purchaser shall notify in writing those Bidders who have failed to meet the Qualification Criteria and/or whose Bids were considered non-responsive to the requirements in the bidding document, advising them of the following information:

(a) the grounds on which their Technical Part of Bid failed to meet the requirements of the bidding document;

(b) their envelope marked "FINANCIAL PART" will be returned to them unopened after the completion of the bid evaluation process and the signing of the Contract;

(c) notify them of the date, time and location of the public opening of the envelopes marked 'FINANCIAL PART".

33.2 The Purchaser shall, simultaneously, notify in writing those Bidders whose Technical Parts have been evaluated as substantially responsive to the bidding document and met the Qualification Criteria, advising them of the following information:

(a) their Bid has been evaluated as substantially responsive to the bidding

document and met the Qualification Criteria; and

(b) their envelope marked "FINANCIAL PART" will be opened at the public opening of Financial Parts;

(c) notify them of the date, time and location of the public opening of the envelopes marked "FINANCIAL PART".

33.3 The opening date shall be not less than ten (10) Business Days from the date of notification of the results of the technical evaluation, specified in ITB 33.1 and 33.2. However, if the Purchaser receives a complaint on the results of the technical evaluation within the ten (10) Business Days, the opening date shall be subject to ITB 50.1. The Financial Part of the Bid shall be opened publicly in the presence of Bidders' designated representatives and anyone who chooses to attend.

33.4 At this public opening the Financial Parts will be opened by the Purchaser in the presence of Bidders, or their designated representatives and anyone else who chooses to attend. Bidders who met the Qualification Criteria and whose Bids were evaluated as substantially responsive will have their envelopes marked "FINANCIAL PART" opened at the second public opening. Each of these envelopes marked "FINANCIAL PART" shall be inspected to confirm that they have remained sealed and unopened. These envelopes shall then be opened by the Purchaser. The Purchaser shall read out the names of each Bidder, the technical score and the total Bid prices, per lot (contract) if applicable, including any discounts and Alternative Bid - Financial Part, and any other details as the Purchaser may consider appropriate.

33.5 Only envelopes of Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation. The Letter of Bid - Financial Part and the Price Schedules are to be initialed by a representative of the Purchaser attending the Bid opening in the manner specified **in the BDS**.

33.6 The Purchaser shall neither discuss the merits of any Bid nor reject any envelopes marked "FINANCIAL PART".

33.7 The Purchaser shall prepare a record of the Financial Part of the Bid opening that shall include, as a minimum:

(a) the name of the Bidder whose Financial Part was opened;

(b) the Bid price, per lot (contract) if applicable, including any discounts,

(c) if applicable, any Alternative Bid - Financial Part.

33.8 The Bidders whose envelopes marked 'FINANCIAL PART" have been opened or their representatives who are present shall be requested to sign the record. The 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.

I. Evaluation of Financial Parts of Bids

34. Evaluation of Financial Parts

34.1 Provided that a Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component, by adding the average price of the item or component quoted by substantially responsive Bidders. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.

34.2 To evaluate the Financial Part of each Bid, the Purchaser shall consider the following:

(a) evaluation will be done for Items or Lots (contracts), as specified **in the BDS;** and the Bid Price as quoted in accordance with ITB 14;

(b) price adjustment for correction of arithmetic errors in accordance with ITB 35.1;

(c) price adjustment due to discounts offered in accordance with ITB 14.4;

(d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 36;

(e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 34.1; and

(f) the additional evaluation factors specified in Section III, Evaluation and Qualification Criteria.

34.3 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.

34.4 If this bidding document allows Bidders to quote separate prices for different lots (contracts), each lot will be evaluated separately to determine the Most Advantageous Bid using the methodology specified in Section III, Evaluation and Qualification Criteria. **Discounts that are conditional on the award of more than one lot or slice shall not be considered for Bid evaluation**.

34.5 The Purchaser's evaluation of a Bid will exclude and not take into account:

(a) in the case of Goods manufactured in the Purchaser's Country, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;

(b) in the case of Goods manufactured outside the Purchaser's Country, already imported or to be imported, customs duties and other import taxes levied on the imported Good, sales and other similar taxes, which will be payable on the Goods if the contract is awarded to the Bidder;

(c) any allowance for price adjustment during the period of execution of the contract, if provided in the Bid.

34.6 The Purchaser's evaluation of a Bid may require the consideration of other factors, in addition to the Bid price quoted in accordance with ITB 14.

These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of Bids, unless otherwise specified **in the BDS** from amongst those set out in Section III, Evaluation and Qualification Criteria. The criteria and methodologies to be used shall be as specified in ITB 34.2 (f).

35. Correction of Arithmetic Errors

35.1 In evaluating the Financial Part of each Bid, the Purchaser shall correct arithmetic errors on the following basis:

(a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;

(b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

35.2 Bidders shall be requested to accept correction of arithmetic errors. Failure to accept the correction in accordance with ITB 35.1, shall result in the rejection of the Bid.

36. Conversion to Single Currency

36.1 For evaluation and comparison purposes, the currency(ies) of the Bids shall be converted in a single currency as specified **in the BDS.**

37. Margin of Preference

37.1 Unless otherwise specified **in the BDS,** a margin of preference shall not apply.

38. Comparison of Financial Parts

38.1 The Purchaser shall compare the evaluated costs of the Bids to determine the Bid that has the lowest evaluated cost. The comparison shall be on the basis of CIP (place of final destination) prices for imported goods and EXW prices, plus cost of inland transportation and insurance to place of destination, for goods manufactured within the Borrower's country, together with prices for any required installation, training, commissioning and other services. The evaluation of prices shall not take into account custom duties and other taxes levied on imported goods quoted CIP and sales and similar taxes levied in connection with the sale or delivery of goods.

39. Abnormally Low Bids

39.1 An Abnormally Low Bid is one where the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns with the Purchaser as to the capability of the Bidder to perform the Contract for the offered Bid Price.

39.2 In the event of identification of a potentially Abnormally Low Bid, the Purchaser shall seek written clarification from the Bidder, including a detailed price analyses of its Bid price in relation to the subject matter of the contract, scope, delivery schedule, allocation of risks and responsibilities and any other requirements of the bidding document.

39.3 After evaluation of the price analyses, in the event that the Purchaser determines that the Bidder has failed to demonstrate its capability to perform the contract for the offered Bid price, the Purchaser shall reject the Bid.

J. Evaluation of Combined Technical and Financial Parts, Most Advantageous Bid and Notification of Intention to Award

40. Evaluation of combined Technical and Financial Parts

40.1 The Purchaser's evaluation of responsive Bids will take into account technical factors, in addition to cost factors in accordance with Section III

Evaluation and Qualification Criteria. The weight to be assigned for the Technical factors and cost is specified **in the BDS**. The Purchaser will rank the Bids based on the evaluated Bid score (B).

40.2 The Purchaser will determine the Most Advantageous Bid. The Most Advantageous Bid is the Bid of the Bidder that meets the Qualification Criteria and whose Bid has been determined to be substantially responsive to the Bidding document and is the Bid with the highest combined technical and financial score.

41. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids

41.1 The Purchaser 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. In case of annulment, all Bids submitted and specifically, Bid securities, shall be promptly returned to the Bidders.

42. Standstill Period

42.1 The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with ITB 47. The Standstill Period commences the day after the date the Purchaser has transmitted to each Bidder the Notification of Intention to Award the Contract. Where only one Bid is submitted, or if this contract is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.

43. Notification of Intention to Award

43.1 The Purchaser shall send to each Bidder (that has not already been notified that it has been unsuccessful) the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:

(a) the name and address of the Bidder submitting the successful Bid;

(b) the Contract price of the successful Bid;

(c) the total combined score of the successful Bidder;

(d) the names of all Bidders who submitted Bids, and their Bid prices as readout, and as evaluated and technical scores;

(e) a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the notification is addressed) was unsuccessful;

(f) the expiry date of the Standstill Period;

(g) instructions on how to request a debriefing and/or submit a complaint during the standstill period.

K. Award of Contract

44. Award Criteria

44.1 Subject to ITB 41, the Purchaser shall award the Contract to the successful Bidder. This is the Bidder whose Bid has been determined to be the Most Advantageous Bid as specified in ITB 40.

45. Purchaser's Right to Vary Quantities at Time of Award

45.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages **specified in the BDS,** and without any change in the unit prices or other terms and conditions of the Bid and the bidding document.

46. Notification of Award

46.1 Prior to the date of expiry of the Bid validity and upon expiry of the Standstill Period, specified in ITB 42.1 or any extension thereof, and upon satisfactorily addressing any complaint that has been filed within the Standstill Period, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award (hereinafter and in the Contract Forms called the "Letter of Acceptance") shall specify the sum that the Purchaser will pay the Supplier in consideration of the execution of the Contract (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price").

46.2 Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Purchaser shall publish the Contract Award

Notice which shall contain, at a minimum, the following information:

(a) name and address of the Purchaser;

(b) name and reference number of the contract being awarded, and the selection method used;

(c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;

(d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting qualification criteria, or were not evaluated, with the reasons therefor;

(e) the name of the successful Bidder, the final total contract price, the contract duration and a summary of its scope; and

(f) successful Bidder's Beneficial Ownership Disclosure Form.

46.3 The Contract Award Notice shall be published on the Purchaser's website with free access if available, or in at least one newspaper of national circulation in the Purchaser's Country, or in the official gazette.

46.4 Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.

47. Debriefing by the Purchaser

47.1 On receipt of the Purchaser's Notification of Intention to Award referred to in ITB 43.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Purchaser for a debriefing. The Purchaser shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.

47.2 Where a request for debriefing is received within the deadline, the Purchaser shall provide a debriefing within five (5) Business Days, unless the Purchaser decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the standstill period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the standstill period

shall not end earlier than five (5) Business Days after the last debriefing takes place. The Purchaser shall promptly inform, by the quickest means available, all Bidders of the extended standstill period

47.3 Where a request for debriefing is received by the Purchaser later than the three (3) Business Day deadline, the Purchaser should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of Public Notice of Award of contract. Requests for debriefing received outside the three (3) day deadline shall not lead to extension of the standstill period.

47.4 Debriefings of unsuccessful Bidders may be done in writing or verbally. The Bidders shall bear their own costs of attending such a debriefing meeting.

48. Signing of Contract

48.1 The Purchaser shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement, and a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership. The Beneficial Ownership Disclosure Form shall be submitted within eight (8) Business Days of receiving this request.

48.2 The successful Bidder shall sign, date and return to the Purchaser, the Contract Agreement within twenty-eight (28) days of its receipt.

48.3 Notwithstanding ITB 48.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its Bid, always provided however, that the Bidder can demonstrate to the satisfaction of the Purchaser and of the Bank that signing of the Contact Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and licenses

necessary for the export of the products/goods, systems or services under the terms of the Contract.

49. Performance Security

49.1 Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC 18 using for that purpose the Performance Security Form included in Section X, Contract Forms, or another Form acceptable to the Purchaser. If the Performance Security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Purchaser. A foreign institution providing a bond shall have a correspondent financial institution located in the Purchaser's Country, unless the Purchaser has agreed in writing that a correspondent financial institution is not required.

49.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the Bidder offering the Most Advantageous Bid.

50. Procurement Related Complaint

50.1 The procedures for making a Procurement-related Complaint are as specified in the BDS.

Section II - Bid Data Sheet (BDS)

The following specific data for the Goods to be procured shall complement, supplement, and/or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

[Where an e-procurement system is used, modify the relevant parts of the BDS accordingly to reflect the e-procurement process.]

[Instructions for completing the Bid Data Sheet are provided, as needed, in the notes in italics mentioned for the relevant ITB.]

ITB Reference	A. General
ITB 1.1	The reference number of the Request for Bids (RFB) is **:** ***KG/KEMS/G/2025/RFB-03-1*** The Purchaser is: ***Ministry of Energy of Kyrgyz Republic*** The name of the RFB is: ***Supply of smart meters***
ITB 2.1	The Borrower is: ***Kyrgyz Republic*** The name of the Project is: ***Electricity Sector Modernization and Sustainability Project***
ITB 4.1	Maximum number of members in the Joint Venture (JV) shall be: ***not more than 2 (two)***
ITB 4.5	A list of debarred firms and individuals is available on the Bank's external website: http://www.worldbank.org/debarr.
	B. Contents of Bidding Document
ITB 7.1	For **Clarification of Bid purposes** only, the Purchaser's address is: Attention: *Mr. Guljigit Murzakarimov* Address: *326 Jibek-Joly av.* Floor/Room number*: 1st floor, 122* City: *Bishkek* ZIP Code: *720040* Country: Kyrgyz Republic Electronic mail address: murzakarimovg@gmail.com and kems.procur@gmail.com

	Requests for clarification should be received by the Purchaser no later than: ***10 (ten) days* prior to bids submission deadline.** Web page: http://minenergo.gov.kg
	C. Preparation of Bids
ITB 10.1	The language of the Bid is: ***"English"*** ***In addition, the bidding document is translated into the Russian language*** In case of discrepancies between the English and Russian versions, the English version shall prevail. Bidders are allowed, at their own discretion, to submit their bids in one of the two languages mentioned above. Bidders must submit their bids in only one language. The contract to be signed with the winning Bidder will be drawn up in the same language in which the Bid was submitted, and which will further regulate the contractual relationship between the Purchaser and the winning Bidder. The bidder does not have to sign the translated version of his contract. Russian translations are recommended to bidders in case the tender offer is submitted in English, however, the absence of a supporting translation into Russian is not considered a reason for rejecting any offer. All correspondence is carried out in the language of the submitted Bid.
ITB 11.2 (i) & 11.3 (d)	The Bidder shall submit the following additional documents in its Bid: 1. ***Filled Technical Specifications compliance table;*** 2. ***Certified balance sheets and cash flow statements (or equivalent) for three full financial years (2022, 2023 and 2024);*** 3. ***A certified copy of the company's registration certificate (in the case of a joint venture, a certificate of registration of all members of the joint venture);*** 4. ***A copy(s) of a successfully completed similar contract(s) for the last 5 years (2020-2024) with a delivery schedule and a description of the equipment, including contact information of previous customers (phone numbers, fax numbers, email address, postal address);*** 5. ***Information about the service centers of the Bidder who will be responsible for the provision of warranty and maintenance services under this contract in Kyrgyz Republic or credible plan for its establishment;*** ***If the Bidder is not the manufacturer of the equipment, then he must provide the manufacturer's authorization letter on the letterhead.***

ITB 13.1	Alternative Bids (Technical and Financial Parts) ***shall not be*** considered.
ITB 14.5	The prices quoted by the Bidder ***shall not*** be subject to adjustment during the performance of the Contract.
ITB 14.6	Prices quoted for items shall correspond at least to ***100*** percent of the quantities specified for this lot.
ITB 14.7	The Incoterms edition is: ***Incoterms 2020***.
ITB 14.8 (a)(iii), (b)(ii) and (c)(v)	Final Destination (Project Site): 50% of the equipment: **Destination 1.1** – (Central Warehouse) Chuy oblast *Dachnoe v., GES-5, Alamudun region., Kyrgyz Republic* 50% of the equipment: **Destination 1.2** – (Osh PES) Osh oblast *b/n Rembaza, Djambulskaya str., Turan microregion, Osh city, Kyrgyz Republic*
ITB 14.8 (b)(i)	Place of Destination: ***CIP Bishkek***
ITB 15.1	The Bidder ***is not*** required to quote in the currency of the Purchaser's Country the portion of the Bid price that corresponds to expenditures incurred in that currency.
ITB 16.4	Period of time the Goods are expected to be functioning (for the purpose of spare parts): ***60 months***
ITB 17.2 (a)	Manufacturer's authorization is: ***required***
ITB 17.2 (b)	After sales service is: ***required***
ITB 18.1	The Bid shall be valid until: ***October 28, 2025***
ITB 18.3 (a)	**The Bid price shall be adjusted by the following factor(s):** In the case of fixed price contracts, the Contract price shall be the Bid price adjusted by the following factor:

	- For the local currency portion of the Contract Price: adjusted by the local Consumer Price Index (CPI) published by the National Statistical Committee of the Kyrgyz Republic for the period of extension. - For the foreign currency portion of the Contract Price: adjusted by the international inflation index for the country of the foreign currency during the period of extension.
ITB 19.1	A *Bid Security* ***shall be*** required. A Bid-Securing Declaration ***shall not be*** required. The amount and currency of the Bid Security shall be **US$ 200 000.00 or equivalent in freely convertible currency.**
ITB 19.3 (d)	Other types of acceptable securities: **None**
ITB 20.3	The written confirmation of authorization to sign on behalf of the Bidder shall consist of**:** ***Power of Attorney***
	D. Submission of Bids
ITB 21.2	In addition to the original of the Bid, the number of copies is**:** ***2 (two)***
ITB 22.1	For **Bid submission purposes** only, the Purchaser's address is: Attention: ***Mr. Guljigit Murzakarimov*** Street Address: ***326 Jibek-Joly av.*** Floor/ Room number: ***1st floor, room 122*** City: ***Bishkek city*** ZIP/Postal Code: ***720040*** Country: ***Kyrgyz Republic*** **The deadline for Bid submission is:** Date: ***September 15, 2025*** Time: ***16:00 (Bishkek time)*** Bidders ***shall not*** have the option of submitting their Bids electronically.
	E. Public Opening of Technical Parts of Bids
ITB 25.1	The Bid opening shall take place at: Street Address: ***326 Jibek-Joly av.*** Floor/ Room number: ***3rd floor, room 315A (Conference-Hall)***

<table>
<tr><td></td><td>City: Bishkek city
ZIP/Postal Code: 720040
Country: Kyrgyz Republic
The deadline for Bid submission is:
Date: September 15, 2025
Time: 16:00 (Bishkek time)</td></tr>
<tr><td>ITB 25.6</td><td>The Letter of Bid - Technical Part and the sealed envelope marked “Second Envelope - Financial Part” shall be initialed by 2 (two) representatives of the Purchaser conducting Bid opening.</td></tr>
<tr><td colspan="2">G. Evaluation of Technical Parts of Bids</td></tr>
<tr><td>ITB 32.4</td><td>The weighting to be given for Rated Criteria (including technical and non-price factors) is: 60%
The technical factors (and sub factors if any), which for purposes of this document carry the same meaning as Rated Criteria, and the corresponding scores out of 100% are:
<table>
<tr><th>No.</th><th>Criteria description</th><th>Weighting factors</th></tr>
<tr><td>1.</td><td>Warranty, Technical Support & After-Sales Service</td><td>40%</td></tr>
<tr><td>2.</td><td>System Architecture, Scalability & Compatibility</td><td>35%</td></tr>
<tr><td>3.</td><td>Cybersecurity & Data Protection</td><td>15%</td></tr>
<tr><td>4.</td><td>Software Rights / Alternatives</td><td>10%</td></tr>
</table></td></tr>
<tr><td colspan="2">H. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts of Bids</td></tr>
<tr><td>ITB 33.5</td><td>The Letter of Bid – Financial Part and the Price Schedules shall be initialed by 2 (two) representatives of the Purchaser conducting Bid opening.
Each Financial Part of Bid shall be initialed by the Representative of the Purchaser and shall be numbered, any modification to the unit or total price shall be initialed by the Representative of the Purchaser, etc.</td></tr>
<tr><td></td><td>I. Evaluation of Financial Part of Bids</td></tr>
</table>

ITB 34.2(a)	Evaluation will be done for entire package.
ITB 34.6	**(a)** Deviation in Delivery schedule: ***No*** **(b)** Deviation in payment schedule: ***No*** **(c)** the cost of major replacement component, mandatory spare parts, and service: ***No*** **(d)** the availability in the Purchaser's Country of spare parts and after-sales services for the equipment offered in the Bid: ***No*** **(e)** Life cycle costs: the costs during the life of the goods or equipment ***No*** **(f)** the performance and productivity of the equipment offered; ***No***
ITB 36.1	The currency that shall be used for Bid evaluation and comparison purposes to convert all Bid prices expressed in various currencies into a single currency is: **Kyrgyz Som (KGS).** The exchange rate for conversion shall be the **selling rate** as published by the **National Bank of the Kyrgyz Republic (www.nbkr.kg)** on the date of technical bid opening. The date for the exchange rate shall be*:* ***the date of bid opening technical proposal.***
ITB 37.1	A margin of domestic preference ***shall not*** apply.
J. Evaluation of Combined Technical and Financial Parts and Most Advantageous Bid	
ITB 40.1	The weight to be given for cost is: **Cost = 0.4%**, **Technical = 0.6%**
	J. Award of Contract
ITB 45.1	The maximum percentage by which quantities may be increased is: ***30%*** The maximum percentage by which quantities may be decreased is: ***30%***
ITB 50.1	The procedures for making a Procurement-related Complaint are detailed in the "Procurement Regulations for IPF Borrowers (Annex III)." If a Bidder wishes to make a Procurement-related Complaint, the Bidder should submit its complaint following these procedures, in writing (by the quickest means available, that is either by email or fax), to: **For the attention**: *Mr. Guljigit Murzakarimov*

	Title/position: *PMO Director* **Purchaser**: *Ministry of Energy of Kyrgyz Republic* **Email address***:* murzakarimovg@gmail.com and kems.procur@gmail.com A copy of the complaint can be sent for the Bank's information and monitoring to: pprocurementcomplaints@worldbank.org In summary, a Procurement-related Complaint may challenge any of the following: **1.** the terms of the Bidding Documents; **2.** the Purchaser's decision to exclude a Bidder from the procurement process prior to the award of contract; and **3.** the Purchaser's decision to award the contract.

Section III - Evaluation and Qualification Criteria

This Section contains the criteria that the Purchaser shall use to evaluate Bids and qualify the Bidders. No other factors, methods or criteria shall be used other than specified in this bidding document.

The Purchaser shall select the criteria deemed appropriate for the procurement process, insert the appropriate wording using the samples below or other acceptable wording, and delete the text in italics]

TECHNICAL PART

1. Qualification

Qualification Criteria (ITB 32.1)

The Purchaser shall assess each Bid against the following Qualification Criteria. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

(c) **Financial Capability**: The Bidder shall submit audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Purchaser, for **the last 3 (three) years (2022, 2023, 2024)** prior to bid submission deadline, demonstrating the current soundness of the Bidder's financial position. For a joint venture, this requirement shall be met by each member:

(d) **Specific Experience:** The Bidder shall demonstrate that it has successfully completed at least *2 of contracts* within the last 5 years prior to bid submission deadline, total with a value of at least USD 12,000,000, that have been successfully and substantially completed and that are similar in nature and complexity to the Goods and Related Services under the Contract. Contracts considered similar in nature and complexity shall include the supply, delivery, installation, and/or commissioning of Advanced Metering Infrastructure (AMI), Automated Meter Reading (AMR), or smart electricity metering systems, including associated software and communication components. For a joint venture, this requirement may be met by all members combined.

(e) **Documentary Evidence:** The Bidder shall furnish documentary evidence to demonstrate that the Goods it offers meet the following usage requirement:

1) full compliance with technical specifications, warranty obligations, after-sales service (specify the addresses of service centers in the Kyrgyz Republic); The documentary evidence should inter-alia include description of proposed service facilities, their location(s), description of certified service staff that will be made available in the Purchaser's country and similar details. If local capacity to provide after-sales services is not in place at the time of bidding then the bidder must include a credible plan for establishing such capacity by the time of Goods' delivery.

2) The bidder must provide in his bid all technical specifications, technical schedules or other technical information of the proposed product for the purpose of comparing these technical conditions in this bidding document and determining compliance with the requirements.

(f) **Manufacturing experience and Technical Capacity**: For the items under the Contract that the bidder is a manufacturer, the Bidder shall furnish documentary evidence to demonstrate that:

(i) The Bidder shall demonstrate that it has been manufacturing goods of similar nature and complexity — including, but not limited to, single-phase and three-phase smart electricity meters and data concentrators (or equivalent communication equipment) — for at least five (5) years before the bid submission deadline.

In addition, the Bidder shall demonstrate that, within the last five (5) years, it has successfully supplied at a minimum:
100,000 single-phase smart electricity meters;
10,000 three-phase smart electricity meters; and
1,000 data concentrators or equivalent communication devices.

The Bidder shall provide documentary evidence (such as supply contracts, delivery notes, and client references) to substantiate compliance with the above requirements. In the case of a Joint Venture, the requirement may be met collectively by the members.

(ii) The Bidder shall demonstrate that it has maintained an annual production capacity of goods similar in nature and complexity — including, but not limited to, single-phase and three-phase smart electricity meters and data concentrators (or equivalent communication equipment) — of at least two (2) times the quantities required under the Contract, for each of the last five (5) years prior to the bid submission deadline. The Bidder shall provide documentary evidence (such as factory production reports, third-party certifications, or factory audit reports) to substantiate compliance with the above requirement. In the case of a Joint Venture, the requirement may be met collectively by the members.

(iii) The Bidder (or its manufacturer) shall demonstrate proven experience and technical capability in implementing cybersecurity measures for smart metering systems, including but not limited to:

- Secure data transmission protocols (e.g., DLMS/COSEM with encryption);
- Implementation of cybersecurity standards such as **ISO/IEC 27001** or equivalent;
- Integration of secure communication modules and firmware protection mechanisms.

The Bidder shall provide documentary evidence of at least two (2) successfully completed projects in the last five (5) years where cybersecurity requirements were implemented for AMI/AMR or smart electricity metering systems.

(g) **Manufacturer's authorization**: A Bidder who does not manufacture an item/s where a manufacturer authorization is required in accordance with BDS ITB 17.2 (a), the Bidder shall provide evidence of being duly authorized by a manufacturer (Manufacturer's Authorization Form, Section IV, Bidding Forms), meeting the criteria in (d) (i) and (ii) above, to supply the Goods;

(h) A bidder who does who does not manufacture an item/s where a manufacturer authorization is not required in accordance with BDS ITB 17.2 (a), the bidder shall submit documentation

on, its status as a supplier, to the satisfaction of the Purchaser *(e.g. authorized dealer/ distributor of the items)*.

At the time of Contract Award, the Bidder (including each subcontractor proposed by the Bidder) shall not be subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.

2. Technical Evaluation (ITB 32.4)

Assessment of adequacy of Technical Part with the requirements

The Technical Part of the bid will first be reviewed for compliance with the minimum technical requirements outlined in Section VII – Schedule of Requirements, including but not limited to:

- Minimum warranty period of 60 months;
- Compliance with key functional and technical specifications of smart electricity meters and related components;
- Compliance with applicable international standards (e.g., DLMS/COSEM, IEC 62056, ISO 27001);
- Minimum cybersecurity, compatibility, and equipment durability thresholds.

Only bids meeting these minimum requirements will proceed to the technical evaluation stage based on Rated Criteria, in accordance with BDS ITB 32.4.

The Rated Criteria, including technical and non-price factors, will be evaluated using the scores and weights below:

Rated Technical Criteria and Weighting:

1. **Warranty, Technical Support & After-Sales Service – Weight: 40%**

Score	Description
4	Warranty ≥ 72 months; **credible plan for establishing an authorized local service center in Kyrgyz Republic (in line with ITB 11.2(i) and 11.3(d))**; full free technical support for the entire warranty period; on-site services; complete documentation provided.
3	Warranty 66–71 months; regional service center in Central Asia with a documented plan for local support in Kyrgyz Republic; full free technical support; on-site services; all documentation provided.
2	Warranty 61–65 months; free technical support; no on-site service.
1	Warranty ≤ 60 months; free remote technical support only.
0	Warranty ≤ 60 months, with no technical support.

2. **System Architecture, Scalability & Compatibility – Weight: 35%**

Score	Description
4	Fully open architecture; full integration support with external MDMS and FDM/WFM/IWM systems; perpetual license with no user/device limits; scalable

Score	Description
	with no added costs; allows integration of previous implementations into unified AMI.
3	Fully open architecture; full integration with external systems; perpetual license without limits; modular scalability; integration of existing solutions with minor limitations.
2	Partially open architecture; full integration with external systems; license without device limits; modular scalability; integration possible with some limitations.
1	Partially open architecture; integration only within vendor's ecosystem; license with device limits; requires full replacement for expansion; limited integration with previous systems.
0	Fully closed architecture; no external integration; license limited by device count; no backward integration.

3. Cybersecurity & Data Protection – Weight: 15%

Score	Description
4	Full compliance with IEC 62443 and ISO/IEC 27001; encryption, access control, incident logging, documented procedures.
3	Core measures in place, partially documented; partial compliance.
2	Basic security measures implemented; no international certification.
1	Weak security implementation; no incident policy; basic controls only.
0	Absence of information on cybersecurity and data protection.

4. Software Rights / Alternatives – Weight: 10%

Score	Description
4	Full access to source code; unrestricted rights for modification and support; formal commitment letter provided.
3	Full source code access with limitations on commercial use/third-party transfer; commitment letter provided.
2	Access to partial source code or API/client-side only; commitment letter provided.
1	API-only access with functional limitations; commitment letter provided.
0	No access; fully proprietary solution.

The total maximum score is 400 points.

The evaluation will be carried out: 60% to the technical part and 40% to the financial part

The score for each sub- factor (i) within a factor (j) will be combined with the scores of sub- factors in *the* same factor as a weighted sum to form the Factor Technical Score using the following formula:

$$S_j \equiv \sum_{i=1}^{k} t_{ji} * w_{ji}$$

where:

t_{ji} = the technical score for sub- factor "i" in factor "j",

w_{ji} = the weight of sub- factor "i" in factor "j",

k = the number of scored sub-factors in factor "j", and

$$\sum_{i=1}^{k} w_{ji} = 1$$

The Factor Technical Scores will be combined in a weighted sum to form the total Technical Bid Score using the following formula:

$$T \equiv \sum_{j=1}^{n} S_j * W_j$$

where:

S_j = the Factor Technical Score of factor "j",

W_j = the weight of factor "j" as specified **in the BDS,**

n = the number of Factors, and

$$\sum_{j=1}^{n} W_j = 1$$

FINANCIAL PART

1. Margin of Preference (ITB 37) – Not applicable

If the Bidding Data Sheet so specifies, the Purchaser will grant a margin of preference to goods manufactured in the Purchaser's country for the purpose of Bid comparison, in accordance with the procedures outlined in subsequent paragraphs.

Substantially responsive Bids will be classified in one of three groups, as follows*:*

(a) **Group A:** Bids offering goods manufactured in the Purchaser's Country, for which (i) labor, raw materials, and components from within the Purchaser's Country account for more than thirty (30) percent of the EXW price; and (ii) the production facility in which they will be manufactured or assembled has been engaged in manufacturing or assembling such goods at least since the date of Bid submission.

(b) **Group B:** All other Bids offering Goods manufactured in the Purchaser's Country.

(c) **Group C:** Bids offering Goods manufactured outside the Purchaser's Country that have been already imported or that will be imported.

To facilitate this classification by the Purchaser, the Bidder shall complete whichever version of the Price Schedule furnished in the bidding document is appropriate provided, however, that the completion of an incorrect version of the Price Schedule by the Bidder shall not result in rejection of its Bid, but merely in the Purchaser's reclassification of the Bid into its appropriate Bid group.

The Purchaser will first review the Bids to confirm the appropriateness of, and to modify as necessary, the Bid group classification to which Bidders assigned their Bids in preparing their Bid Forms and Price Schedules.

Following the combined evaluation procedure described below, the Bids in each group will then be compared to determine the Most Advantageous Bid in that group. The Most Advantageous Bid from each group shall then be compared with each other and if as a result of this comparison a Bid from Group A or Group B is the Most Advantageous, it shall be selected for the award.

If as a result of the preceding comparison, a Bid from Group C is the Most Advantageous Bid, all Bids from Group C shall be further compared with the Most Advantageous Bid from Group A after adding to the evaluated price of goods offered in each Bid from Group C, for the purpose of this further comparison only, an amount equal to 15% (fifteen percent) of the respective CIP Bid price for goods to be imported and already imported goods. Both prices shall include unconditional discounts and be corrected for arithmetical errors. If the Bid from Group A is the Most Advantageous, it shall be selected for award. If not, the Most Advantageous Bid from Group C shall be selected.

2. Evaluation Criteria (ITB 34.6)

The Purchaser shall use the criteria and methodologies listed in this Section to evaluate the Financial Part.

The Purchaser's evaluation of the Financial Part may take into account, in addition to the Bid Price, one or more of the following factors as **specified in BDS ITB 34.6,** using the following criteria and methodologies.

(a) Delivery schedule – **Not applicable**

(b) Deviation in payment schedule. – **Not applicable**

(c) Cost of major replacement components, mandatory spare parts, and service **-** – **Not applicable**

(d) Availability in the Purchaser's Country of spare parts and after sales services for equipment offered in the Bid **-** – **Not applicable**

(e) Life Cycle Cost **-** – **Not applicable**

(f) Performance and productivity of the equipment **- Not applicable**

(g) Specific additional criteria – **Not applicable**

Combined Evaluation

The Purchaser will evaluate and compare the Bids that have been determined to be substantially responsive.

The Purchaser's evaluation of responsive Bids will take into account technical factors, in addition to cost factors.

An Evaluated Bid Score (B) will be calculated for each responsive Bid using the following formula (for comparison in percentages), which permits a comprehensive assessment of the Bid price and the technical merits of each Bid:

$$B \equiv \frac{Clow}{C} * X * 100 + \frac{T}{Thigh} * (1 - X) * 100$$

where

C = Evaluated Bid Price

C_{low} = the lowest of all Evaluated Bid Prices among responsive Bids

T = the total Technical Score awarded to the Bid

T_{high} = the Technical Score achieved by the Bid that was scored best among all responsive Bids

X = weight for the Cost as specified in the BDS

The Bid with the best evaluated Bid Score (B) among responsive Bids shall be the Most Advantageous Bid provided the Bidder is qualified to perform the Contract.

Multiple Contracts (ITB 34.4) - Not applicable

Alternative Bids (ITB 13.1) - Not applicable

Section IV - Bidding Forms

Table of Forms

Letter of Bid – Technical Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

Place this Letter of Bid in the first envelope "TECHNICAL PART".

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

Note: All italicized text in black font is to help Bidders in preparing this form and Bidders shall delete it from the final document.

Date of this Bid submission: ----days *of Bid submission*
RFB No.: [*insert number of Bidding process*]
Request for Bid No.: [*insert identification*]
Alternative No.: [*insert identification No if this is a Bid for an alternative*]

To: **[*insert complete name of Purchaser*]**

We, the undersigned Bidder, hereby submit our Bid, in two parts, namely:

(a) the Technical Part, and

(b) the Financial Part.

In submitting our Bid we make the following declarations:

(a) **No reservations:** We have examined and have no reservations to the bidding document, including addenda issued in accordance with Instructions to Bidders (ITB 8);

(b) **Eligibility**: We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;

(c) **Bid/Proposal-Securing Declaration**: We have not been suspended nor declared ineligible by the Purchaser based on execution of a Bid Securing Declaration or Proposal Securing Declaration in the Purchaser's country in accordance with ITB 4.7;

(d) **Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment (SH):** [*select the appropriate option from (i) to (iii) below and delete the others. In case of JV members and/or subcontractors, indicate the status of disqualification by the Bank of each JV member and/or subcontractor]*.

We, including any of our subcontractors:

(i) [have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]

(ii) [are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]

(iii) [had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations, and were removed from the disqualification list. An arbitral award on the disqualification case has been made in our favor.]

(e) **Conformity:** We offer to supply in conformity with the bidding document and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods: [*insert a brief description of the Goods and Related Services*];

(f) **Bid Validity**: Our Bid shall be valid until *October 28, 2025, in accordance with ITB 18.1*, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(g) **Performance Security**: If our Bid is accepted, we commit to obtain a performance security in accordance with the bidding document;

(h) **One Bid per Bidder**: We are not submitting any other Bid(s) as an individual Bidder, and we are not participating in any other bid(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITB 4.3, other than Alternative Bids submitted in accordance with ITB 13;

(i) **Suspension and Debarment**: We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Purchaser's country laws or official regulations or pursuant to a decision of the United Nations Security Council;

(j) **State-owned enterprise or institution**: [*select the appropriate option and delete the other*] [*We are not a state-owned enterprise or institution*] / [*We are a state-owned enterprise or institution but meet the requirements of ITB 4.6*];

(k) **Binding Contract**: We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;

(l) **Not Bound to Accept**: We understand that you are not bound to accept the lowest evaluated cost Bid, the Most Advantageous Bid or any other Bid that you may receive; and

(m) **Fraud and Corruption**: We hereby certify that we have taken steps to ensure that no person acting for us, or on our behalf, engages in any type of Fraud and Corruption.

Name of the Bidder: *[*insert complete name of Bidder*]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ** [*insert complete name of person duly authorized to sign the Bid*]

Title of the person signing the Bid: [*insert complete title of the person signing the Bid*]

Signature of the person named above: [*insert signature of person whose name and capacity are shown above*]

Date signed [*insert date of signing*] **day of** [*insert month*], [*insert year*]

*****: In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder.
**: Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Technical Part

[Note to Purchaser: Modify as appropriate]

The technical bid shall include all relevant information required to evaluate the technical Part in accordance with the requirements.

To establish the conformity of the Goods and Related Services to the RFB document, the Bidder shall furnish the documentary evidence that the Goods conform to the technical specifications and standards, including any essential technical and performance characteristics specified in Section VII, Schedule of Requirements. Any required functional guarantees shall also be provided. The attached forms/format may support the Bidder to organize information required to present its technical bid.

The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.

In the interest of timely bid evaluation and contract award, Bidders are encouraged not to overload the supporting materials with documents that do not directly address the Purchaser's requirements.

The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period specified in the BDS following commencement of the use of the goods by the Purchaser.

Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.

If the contract has been assessed to present potential or actual cyber security risks, the technical bid must include proposed cyber security risks management plan.

If there are assessed supply chain risks, the technical bid must include proposed supply chain risk management plan.

The Manufacture's Authorizations shall be included in accordance with ITB BDS 17.2 (a) and the attached Manufacturer's Authorization form.

Technical Bid Checklist

Technical. Requirement No. _	Technical Requirement: *[insert: description of requirement]*
Bidder's technical bid/ compliance:	
Bidder's cross references to supporting information in the Technical Bid:	

Manufacturer's Authorization

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its Bid, if so indicated in the **BDS.**]*

Date: *[insert date (as day, month and year) of Bid submission]*

RFB No.: *[insert number of RFB process]*
Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer],* who are official manufacturers of *[insert type of goods manufactured],* having factories at [insert full address of Manufacturer's factories], do hereby authorize *[insert complete name of Bidder]* to submit a Bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods],* and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

We confirm that we do not engage or employ forced labor or persons subject to trafficking or child labor, in accordance with Clause 14 of the General Conditions of Contract.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid submission*]
RFB No.: *[insert number of Bidding process]*
Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of_ _____ pages

1. Bidder's Name *[insert Bidder's legal name]*
2. In case of JV, legal name of each member : *[insert legal name of each member in JV]*
3. Bidder's actual or intended country of registration: *[insert actual or intended country of registration]*
4. Bidder's year of registration: *[insert Bidder's year of registration]*
5. Bidder's Address in country of registration: *[insert Bidder's legal address in country of registration]*
6. Bidder's Authorized Representative Information Name: *[insert Authorized Representative's name]* Address: *[insert Authorized Representative's Address]* Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]* Email Address: *[insert Authorized Representative's email address]*
7. Attached are copies of original documents of *[check the box(es) of the attached original documents]* ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4. ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1. ☐ In case of state-owned enterprise or institution, in accordance with ITB 4.6 documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that the Bidder is not under the supervision of the Purchaser

8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.

Bidder's JV Members Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture]].

Date: *[insert date (as day, month and year) of Bid submission*]
RFB No.: *[insert number of RFB process]*
Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of_ _____ pages

1. Bidder's Name: *[insert Bidder's legal name]*
2. Bidder's JV Member's name: *[insert JV's Member legal name]*
3. Bidder's JV Member's country of registration: *[insert JV's Member country of registration]*
4. Bidder's JV Member's year of registration: *[insert JV's Member year of registration]*
5. Bidder's JV Member's legal address in country of registration: *[insert JV's Member legal address in country of registration]*
6. Bidder's JV Member's authorized representative information Name: *[insert name of JV's Member authorized representative]* Address: *[insert address of JV's Member authorized representative]* Telephone/Fax numbers: *[insert telephone/fax numbers of JV's Member authorized representative]* Email Address: *[insert email address of JV's Member authorized representative]*
7. Attached are copies of original documents of *[check the box(es) of the attached original documents]* ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Purchaser, in accordance with ITB 4.6. 8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder shall provide additional information on beneficial ownership for each JV member using the Beneficial Ownership Disclosure Form.

Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment Performance Declaration

[The following table shall be filled in by the Bidder, each member of a Joint Venture and each subcontractor proposed by the Bidder]

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
Joint Venture Member's or Subcontractor's Name: *[insert full name]*
RFB No. and title: *[insert RFB number and title]*
Page *[insert page number]* of *[insert total number]* pages

SEA and/or SH Declaration **in accordance with Section III, Qualification Criteria, and Requirements**
We: ☐ (a) have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations ☐ (b) are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations ☐ (c) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations, and were removed from the disqualification list. An arbitral award on the disqualification case has been made in our favor.
[*If (c) above is applicable, attach evidence of an arbitral award reversing the findings on the issues underlying the disqualification.]*

Form of Bid Security

(Bank Guarantee)

[The bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Purchaser to insert its name and address]*

RFB No.: *[Purchaser to insert reference number for the Request for Bids]*

Alternative No.*: [Insert identification No if this is a Bid for an alternative]*

Date: *[Insert date of issue]*

BID GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ *[insert name of the Bidder, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof]* (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its Bid (hereinafter called "the Bid") for the execution of _____ under Request for Bids No. _____ _ ("the RFB").

Furthermore, we understand that, according to the Beneficiary's conditions, Bids must be supported by a Bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

(a) has withdrawn its Bid prior to the Bid validity expiry date set forth in the Applicant's Letter of Bid, or any extended date provided by the Applicant; or

(b) having been notified of the acceptance of its Bid by the Beneficiary prior to the expiry date of the Bid validity or any extension thereof provided by the Applicant has failed to: (i) sign the contract agreement, or (ii) furnish the performance security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee will expire: (a) if the Applicant is the successful Bidder, upon our receipt of copies of the Contract agreement signed by the Applicant and the performance security issued to the Beneficiary in relation to such Contract agreement; or (b) if the Applicant is not the successful Bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Bidding process; or (ii) twenty-eight days after the expiry date of the Bid validity.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

_____

[Signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

Letter of Bid - Financial Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

Place this Letter of Bid - Financial Part in the second envelope marked "FINANCIAL PART".

The Bidder must prepare the Letter of Bid - Financial Part on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: ------ *day of Bid submission*
RFB No.: [*insert number of bidding process*]
Request for Bid No.: [*insert identification*]
Alternative No.: [*insert identification No if this is a Bid for an alternative*]

To: [*insert complete name of Purchaser*]

We, the undersigned Bidder, hereby submit the second part of our Bid, the Financial Part

In submitting our Financial Part we make the following additional declarations:

(a) **Bid Validity**: Our Bid shall be valid until *October 28, 2025, in accordance with ITB 18.1,* and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(b) **Total Price:** The total price of our Bid, excluding any discounts offered in item (c) below is:

In case of only one lot, the total price of the Bid is [*insert the total price of the bid in words and figures, indicating the various amounts and the respective currencies*];

In case of multiple lots, the total price of each lot is [*insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies*];

In case of multiple lots, total price of all lots (sum of all lots) [*insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies*];

(c) **Discounts:** The discounts offered and the methodology for their application are:

(i) The discounts offered are: [*Specify in detail each discount offered*]

(ii) The exact method of calculations to determine the net price after application of discounts is shown below: [*Specify in detail the method that shall be used to apply the discounts*];

(d) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: [*insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity*].

Name of Recipient	Address	Reason	Amount

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

(e) **Binding Contract:** We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed.

Name of the Bidder:*[*insert complete name of the Bidder*]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ** [*insert complete name of person duly authorized to sign the Bid*]

Title of the person signing the Bid: [*insert complete title of the person signing the Bid*]

Signature of the person named above: [*insert signature of person whose name and capacity are shown above*]

Date signed [*insert date of signing*] **day of** [*insert month*], [*insert year*]

*****: In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder.

**: Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

Price Schedule: Goods Manufactured Outside the Purchaser's Country, to be Imported

(Group C Bids, goods to be imported)

Currencies in accordance with ITB 15

Date:_____
RFB No: _____

Alternative No: _____
Page N° _____ of _____

1	2	3	4	5	6	7	8	9
Line Item N°	Description of Goods	Country of Origin	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price CIP *[insert place of destination]* in accordance with ITB 14.8(b)(i)	CIP Price per line item (Col. 5x6)	Price per line item for inland transportation and other services required in the Purchaser's Country to convey the Goods to their final destination specified in BDS	Total Price per Line item (Col. 7+8)
[insert number of the item]	*[insert name of good]*	*[insert country of origin of the Good]*	*[insert quoted Delivery Date]*	*[insert number of units to be supplied and name of the physical unit]*	*[insert unit price CIP per unit]*	*[insert total CIP price per line item]*	*[insert the corresponding price per line item]*	*[insert total price of the line item]*
							Total Price	

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[Insert Date]*

Price Schedule: Goods Manufactured Outside the Purchaser's Country, already imported*

(Group C Bids, Goods already imported)

Currencies in accordance with ITB 15

Date:_____
RFB No: _____
Alternative No: _____
Page N° _____ of _____

1	2	3	4	5	6	7	8	9	10	11	12
Line Item N°	Description of Goods	Country of Origin	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price including Custom Duties and Import Taxes paid, in accordance with ITB 14.8(c)(i)	Custom Duties and Import Taxes paid per unit in accordance with ITB 14.8(c)(ii) , [to be supported by documents]	Unit Price net of custom duties and import taxes, in accordance with ITB 14.8 (c) (iii) (Col. 6 minus Col.7)	Price per line item net of Custom Duties and Import Taxes paid, in accordance with ITB 14.8(c)(i) (Col. 5×8)	Price per line item for inland transportation and other services required in the Purchaser's Country to convey the goods to their final destination, as specified in BDS in accordance with ITB 14.8 (c)(v)	Sales and other taxes paid or payable per item if Contract is awarded (in accordance with ITB 14.8(c)(iv)	Total Price per line item (Col. 9+10)
[insert number of the item]	*[insert name of Goods]*	*[insert country of origin of the Good]*	*[insert quoted Delivery Date]*	*[insert number of units to be supplied and name of the physical unit]*	*[insert unit price per unit]*	*[insert custom duties and taxes paid per unit]*	*[insert unit price net of custom duties and import taxes]*	*[insert price per line item net of custom duties and import taxes]*	*[insert price per line item for inland transportation and other services required in the Purchaser's Country]*	*[insert sales and other taxes payable per item if Contract is awarded]*	*[insert total price per line item]*
										Total Bid Price	

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[insert date]*

* *[For previously imported Goods, the quoted price shall be distinguishable from the original import value of these Goods declared to customs and shall include any rebate or mark-up of the local agent or representative and all local costs except import duties and taxes, which have been and/or have to be paid by the Purchaser. For clarity the Bidders are asked to quote the price including import duties, and additionally to provide the import duties and the price net of import duties which is the difference of those values.]*

Price Schedule: Goods Manufactured in the Purchaser's Country

Purchaser's Country _____	(Group A and B Bids) Currencies in accordance with ITB 15	Date:_____ RFB No: _____ Alternative No: _____ Page N° _____ of _____

1	2	3	4	5	6	7	8	9	10
Line Item N°	Description of Goods	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price EXW	Total EXW price per line item (Col. 4×5)	Price per line item for inland transportation and other services required in the Purchaser's Country to convey the Goods to their final destination	Cost of local labor, raw materials and components from with origin in the Purchaser's Country % of Col. 5	Sales and other taxes payable per line item if Contract is awarded (in accordance with ITB 14.8(a)(ii)	Total Price per line item (Col. 6+7)
[insert number of the item]	*[insert name of Good]*	*[insert quoted Delivery Date]*	*[insert number of units to be supplied and name of the physical unit]*	*[insert EXW unit price]*	*[insert total EXW price per line item]*	*[insert the corresponding price per line item]*	*[Insert cost of local labor, raw material and components from within the Purchase's country as a % of the EXW price per line item]*	*[insert sales and other taxes payable per line item if Contract is awarded]*	*[insert total price per item]*
								Total Price	

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[insert date]*

Price and Completion Schedule - Related Services

Currencies in accordance with ITB 15					Date:_____ RFB No: _____ Alternative No: _____ Page N° _____ of _____	
1	2	3	4	5	6	7
Service N°	Description of Services (excludes inland transportation and other services required in the Purchaser's Country to convey the goods to their final destination)	Country of Origin	Delivery Date at place of Final destination	Quantity and physical unit	Unit price	Total Price per Service (Col. 5*6 or estimate)
[insert number of the Service]	*[insert name of Services]*	*[insert country of origin of the Services]*	*[insert delivery date at place of final destination per Service]*	*[insert number of units to be supplied and name of the physical unit]*	*[insert unit price per item]*	*[insert total price per item]*
				Total Bid Price		

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[insert date]*

Section V - Eligible Countries

Eligibility for the Provision of Goods, Works and Non Consulting Services in Bank-Financed Procurement

In reference to ITB 4.8 and ITB 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8 (a) and ITB 5.1: *"none".*

Under ITB 4.8(b) and ITB 5.1: *"none".*

Section VI - Fraud and Corruption

(Section VI shall not be modified)

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

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 misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain 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:

(a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank 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

(b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.

b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;

d. Pursuant to the Bank's Anti-Corruption Guidelines, and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;1 (ii) to be a nominated2 sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;

e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect[3] all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

---

1 For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

2 A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

3 Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

PART 2 – Supply Requirements

Section VII - Schedule of Requirements

Contents

1. List of Goods and Delivery Schedule

[The Purchaser shall fill in this table, with the exception of the column "Bidder's offered Delivery date" to be filled by the Bidder]

Line Item N°	Description of Goods	Quantity	Physical unit	Final (Project Site) Destination as specified in BDS	Delivery (as per Incoterms) Date (*days following the date of signing of the Contract*)		
					Earliest Delivery Date	Latest Delivery Date	Bidder's offered Delivery date [*to be provided by the Bidder*]
1	2	3	4	5	6	7	8
Metering devices							
1.1	A TYPE: Single-phase meter (GSM 2G (GPRS) + UMTS 3G (HSPA)	2,000	pcs.	50% of the all equipment: **Destination 1.1** – (Central Warehouse) Chuy oblast *Dachnoe v., GES-5, Alamudun*	10	200 days after contract signing (meters for testing – within 10 days after contract signing)	*days following the date of signing of the Contract]*
1.2	A TYPE: Single-phase meter (WB-PLC+RF)	259,000	pcs.		10		
1.3	B TYPE: Three-phase meter for direct connection (WB-PLC+RF)	29,000	pcs.		10		

1.4	B TYPE: Three-phase meter for direct connection (GSM 2G (GPRS) + UMTS 3G (HSPA) main communication channel)	2,100	pcs.	*region., Kyrgyz Republic* 50% of the all equipment: **<u>Destination 1.2</u>** – <u>(Osh PES) Osh oblast</u> *b/n Rembaza, Djambulskaya str., Turan microregion, Osh city, Kyrgyz Republic*	10	(first delivery – 10% of meters quantity – within 45 days after contract signing)	
1.5	C TYPE: Three-phase meter 5 (10) A WB-PLC+RF	5,900	pcs.		10		
1.6	C TYPE: Three-phase meter 5 (10)A 5(10)A (GSM 2G(GPRS)+UMTS 3G (HSPA	500	pcs.		10		
1.7	D TYPE: Three-phase meter for 3x57,7/100V 5(7,5)A (GSM 2G(GPRS)+UMTS 3G (HSPA)	1,500	pcs.		10		
Controllers							

2.1	Controller (data concentrator)	6,000	pcs.	50% of the all equipment: **Destination 1.1** – (Central Warehouse) Chuy oblast *Dachnoe v., GES-5, Alamudun region., Kyrgyz Republic* 50% of the all equipment: **Destination 1.2** – (Osh PES) Osh oblast *b/n Rembaza, Djambulskaya str., Turan microregion, Osh city, Kyrgyz Republic*	10	200 days after contract signing (controllers for testing – within 10 days after contract signing) (first delivery – 10% of quantity of controllers – within 45 days after contract signing)	
Operation and maintenance hardware and software for electricity meters							
3.1	Server Equipment for ASCME, software, technical support	1			10	45	

1. List of Related Services and Completion Schedule

[This table shall be filled in by the Purchaser. The Required Completion Dates should be realistic, and consistent with the required Goods Delivery Dates (as per Incoterms)]

Service	Description of Service	Quantity[1]	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services
1	Training for the Purchaser's personnel	20	people	Bishkek	60 days after delivery
2	Technical support for operation and maintenance for meters and ASCME	-	-	Bishkek	60 days after delivery
3	The service of a chief engineer for setting up the ASCME system and conducting training for the relevant personnel of JSC NEGK	1	people	Bishkek	60 days after delivery

1. If applicable

Section VII - Schedule of Requirements

TECHNICAL SPECIFICATION FOR METERS OF AUTOMATED METER READING AND CONTROL SYSTEM (ACEMS/AMI)

1. Technical specification for smart meters and AMI system

1.1 TYPE A: Single phase meter (GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4
1.	**Type of electricity meter**		
1.1	Type A: Single-phase meter with two measuring elements	GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE), taking into account the generational changes in mobile communication technologies	
2.	**Standard compliance requirements**		
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-21(or GOST 31819.21) IEC 62053-23(or GOST 31819.23) DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 and subsequent modifications of the above standards	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU. In case of award and signing the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery.	

		The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: - relay testing; - climatic testing; - life cycle of the meter; - meter display; - battery.	
2.3	Type A:	At least 5(60) A or higher	
3.	**Basic parameters**		
3.1	Start-up current	0,4% I_b	
3.2	Rated voltage U_n	220V	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	160-270V	
3.4	Frequency f_n	50 Hz ±2%	
4.	**Overcurrent**		
4.1	Short circuit< 10msec	$30xI_{max}$	
5.	**Measuring accuracy**		
5.1	Active energy	1,0	
5.2	**Climatic conditions**		
6.	Operating temperature	-40°C … +70°C	
6.1	Storage tempetature	-40°C … +70°C	
7.	**Design requirements**		
7.1	Insulation strength	4 kV (protection class II)	
7.2	Tightness	IP 54	
7.3	Method of connection to network cables	Screw connection	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	

7.5	Name plate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic	
8.	**Information display**		
8.1	Display type	LCD display, or any other	
8.2	Image clarity	during ≥20 years	
8.3	Display of measured values	At least 8 digits. The display shall provide for the output of readings with at least 2 decimals.	
8.4	Display output format	Display information about the position of the load disconnect relay and the reason for tripping/activating it. The display should show information to recognize the reasons for the relay tripping: • Remote disconnection; • Exceeding the active power limit, current limit; • Other cases; After the cause of the trip has been eliminated, the display shall show that the relay is ready for connection. The display of the above information shall be agreed with the client at the time of contract conclusion.	
8.5	Possibility to display the main measured parameters with remote and local configuration	Measurement of active energy and power. Measurement of current and voltage current values.	

8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	
8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy.	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	
8.9	Displaying readings in the absence of power supply (mains voltage)	The meter shall be capable of taking readings in the absence of external power supply	
8.10	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout. Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	
9.	**Backup power supply**		
9.1	Battery	Battery with a guaranteed service life according to the verification interval, but at least 12 years. The battery shall be replaceable without opening the meter housing.	
10.	**Meter memory**		
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minute interval in the amount of 4 values (parameters).	
11.	**Main load trip relay**		
11.1	Relay location	The main load trip relay shall be located in the meter housing.	
11.2	Max. switching voltage	U_n220V±20%	
11.3	Max. switching current	Max. meter current (I_{max})	
11.4	Number of no-load switching operations	At least 100,000 switching operations at rated voltage	

11.5	Number of switching operations at maximum load (in acc. with I_{max})	At least 10,000 switching operations at rated voltage	
11.6	Control of relay operation mode	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC or GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system. In case of mains voltage (supply) failure or other failures, the meter shall transmit to the AMI system the latest data on active and reactive energy, data on the outage time and signals (alarms) recorded by the meter.	
11.7	Relay control	The relay should be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	
12.	**Internal clock**		
12.1	Accuracy	Permissible deviation max. 0.5 sec per day under normal conditions	
12.2	Clock synchronization	Synchronization of the clock with the AMI system shall be performed via the remote communication channel (GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)) used in the system via the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	
13.	**Internal functions of the meter**		

13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter casing (in case of dismountable casing) regardless of the presence of mains voltage; - differential current exceed; - opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optic port, RS-485 port, WB-PLC+RF, GPRS; -electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC or GOST. The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	
14.	**Sealing**		
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company) 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	
15.	**Service life**		
15.1	Average service life	At least 20 years	
16	**Warranty**		
16.1	Warranty period	At least five years for all equipment	
16.2	Data collection	The supplier shall ensure 100% data collection via GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication	

		channel within one day with the mandatory availability of supply voltage at the metering device.	
16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel within 30 min.	
17.	**Local data exchange**		
17.1	Data exchange protocol	DLMS/COSEM IEC 62056-21 Open protocols	
18.	**Remote data exchange**		
18.1	Communication channels	The meter shall provide data transmission via GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel. The meter shall support operation with static and dynamic IP addresses. The meter shall support data transmission to the following systems: 1 – main native AMI system,	
18.2	Main communication channel	GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)	
18.2.1	Type of interface for communication channel	The meter shall have one of the standard communication interfaces with open and standard data exchange protocol for connection of modems (modules) providing GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel.	
18.2.2	Requirements for modem (module)	To provide the main communication channel, the supplier shall equip a modem of the standard: GSM 2G (850, 900, 1800, 1900), UMTS 3G (850, 900, 1900, 2100),	

		4G (800(B20), 1800(B3), 2100(B1), 2300(B40), 2600(B7)). Category Cat1. or another standard of a class/generation higher Modem and interface output shall be located in the meter housing. Modems shall be interchangeable and universal between meter types (A, B, C, D).	
18.3	Optic port access security, RS-485	Security of operation via optic port shall be ensured by passwords of the following access levels: Only reading. Reading and writing. Reading and writing only certain parameters by setting (configuration by setting). Saving logs of all operations (logs), for later monitoring.	
18.4	Local interface	The meter shall have standard optical port.	
19.	**Minimum requirements for functionality**		
19.1	Protection functions against unauthorized access to the meter and alteration of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; • changing the connection sequence of phase and neutral current conductors. The metering device shall have resistance to the impact of external factors defined by IEC or GOST requirements, in case of exceeding the values defined by IEC or GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a	

		functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	
19.2	Alarms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge; 8. There is differential current in the network; 9. Meter housing cover removed, for meters with demountable housing; 10. Restart by watchdog - program restart; 11. Software update error; 12. Measurement factor error - when calibrating the meter is used; 13. Incorrect phase and neutral connection. All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).	
19.3	Logging of all meter actions in the meter memory	All actions	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	
19.5	Interval data	The meter shall be able to save data at intervals of 15 min, 30 min, 60 min, day, month. The periodicity shall be configurable both locally and remotely.	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters:	

		• overcurrent; • overvoltage and undervoltage; • cosφ drop; • differential current exceedance. Exceeding and failure of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event: • transmit to the AMI system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • overcurrent. Limit value exceeding and failing - the meter shall record this event in the event log and depending on the setting to: • transmit to the system; • transmit to the AMI system and trip the relay. When the limit value is normalized - the meter shall record this event in the event log and depending on the setting: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter limit value as well as the meter response to the event shall be set (configured) both locally and remotely.	

		The limit constraint shall operate in parallel and independently with the threshold values. It shall be possible to limit the limit with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU).	
19.8	Functions in case of network voltage (power supply) failure of the meter when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	In case of mains voltage (supply) failure or other failures, the meter shall transmit to the AMI system the latest data on active and reactive energy, data on the outage time and signals (alarms) recorded by the meter.	
19.9	Configuration by SMS when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	It shall be possible to configure GPRS settings for connection via GPRS + HSPA + LTE channel of the meter with AMI system: Server IP address Server port Server APN Online mode, Wake-up mode Other GPRS parameters supported by the system	
20.	**Tariffs**	Operation with at least 4 tariffs shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	
21.	**Compatibility with software of NEGK OJSC and KESC data collection and processing centralized system**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

~~1.~~ 1.2 TYPE A: Signle-phase meter (WB-PLC+RF communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4
1.	**Type of electricity meter**		

1.1	Type A: Signle-phase meter with two measuring elements	WB-PLC+RF communication channel	
2.	**Standard compliance requirements**		
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-21 (or GOST 31819.21) IEC 62053-23 (or GOST 31819.23) DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 IEEE 802.15.4-2020 and subsequent modifications of the above standards	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU. In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery. The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: -WB-PLC+RF -Relay tests -Climatic testing - the life cycle of the meter -for meter display -For battery	
2.3	Type A:	At least 5(60) A or higher	

3.	**Basic parameters**		
3.1	Start-up current	0,4% I_b	
3.2	Rated voltage U_n	220V	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	160-270V	
3.4	Frequency f_n	50Hz ±2%	
4.	**Overcurrent**		
4.1	Short circuit < 10msec	$30xI_{max}$	
5.	**Measuring accuracy**		
5.1	Active energy	1,0	
5.2	**Climatic conditions**		
6.	Operating temperature	-40°C … +70°C	
6.1	Storage tempetature	-40°C … +70°C	
7.	**Design requirements**		
7.1	Insulation strength	4 kV (Protection class II)	
7.2	Tightness	IP 54	
7.3	Method of connection to network cables	Screw connection	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	
7.5	Name plate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic	

8.	**Information display**		
8.1	Display type	LCD display, or any other	
8.2	Image clarity	during ≥20 years	
8.3	Display of measured values	At least 8 digits. The display shall provide for the output of readings with at least 2 decimals.	
8.4	Display output format	Display information about the position of the load disconnect relay and the reason for tripping/activating it. The display should show information to recognize the reasons for the relay tripping: • Remote disconnection; • Exceeding the active power limit, current limit; • Other cases; After the cause of the trip has been eliminated, the display shall show that the relay is ready for connection. The display of the above information shall be agreed with the client at the time of contract conclusion.	
8.5	Possibility to display the main measured parameters with remote and local configuration	Measurement of active energy and power. Measurement of current voltage and current values.	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	
8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	
8.9	Displaying readings in the absence of power supply (mains voltage)	The meter shall be capable of taking readings in the absence of external power supply	

8.10	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout. Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	
9.	**Back up power supply**		
9.1	Battery	Battery with a guaranteed service life according to the verification interval, but at least 12 years. The battery shall be replaceable without opening the meter housing.	
10.	**Meter memory**		
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minute interval in the amount of 4 values (parameters).	
11.	**Main load trip relay**		
11.1	Relay location	The main load trip relay shall be located in the meter housing.	
11.2	Max. switching voltage	U_n220V±20%	
11.3	Max. switching current	Max. meter current (I_{max})	
11.4	Number of no-load switching operations	At least 100,000 switching operations at rated voltage	
11.5	Number of switching operations at maximum load (in acc. with I_{max})	At least 10,000 switching operations at rated voltage	

11.6	Control of relay operation mode	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC or GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system.	
11.7	Relay control	The relay shall be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	
12.	**Internal clock**		
12.1	Accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	
12.2	Clock synchronization	Synchronization of the clock with the AMI system shall be performed via the remote communication channel (WB-PLC+RF) via the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	
13.	**Internal functions of the meter**		
13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter casing (in case of dismountable casing) regardless of the presence of mains voltage; - differential current exceed; - opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage;	

		- attempt of unauthorized access to optic port, RS-485 port, WB-PLC+RF, GPRS; -electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC or GOST. The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	
14.	**Sealing**		
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company); 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	
15.	**Service life**		
15.1	Average service life	At least 20 years	
16	**Warranty**		
16.1	Warranty period	At least 5 years for all equipment	
16.2	Data collection	The supplier shall ensure 98% data collection via WB-PLC+RF communication cahnnel within one day and 100% within 3 days with the mandatory availability of supply voltage at the metering device.	
16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over WB-PLC+RF communication channel within 30 min.	
17	**Local data exchange**		
17.1	Data exchange protocol	DLMS/COSEM IEC 62056-21	

		Open protocols	
18.	**Remote data exchange**		
nn1 8.1	Communication channels	The meter shall provide data transmission via WB-PLC+RF communication channel. Range up to 1500 meters between devices.	
18.2	Main communication channel	WB-PLC+RF	
18.2.1	Type of interface for communication channel	The meter shall have one WB-PLC+RF communication channel.	
18.2.2	Requirements for modem (module)	To provide the communication channel, the supplier shall equip a modem of the WB-PLC+RF standard: 1. RF - IEEE 802.15.4-2020 (863/866/870 MHz, operating mode #1 and #2, 915/915-a/915-b/915-c MHz, operating mode #1 and #3) 2. WB-PLC Frequency range 2~12MHz, 2-30MHz Data transmission speed up to 4 Mbps / 2~12MHz, 10Mbps / 2~30MHz The modem and interface output shall be located in the meter housing. The metering device shall have the functionality to flexibly configure them and automatically select the optimal channel (WB-PLC or RF) and ability to configure disconnection/connection of one of them (WB-PLC or RF). If awarded and contracted, the Supplier shall negotiate RF frequencies (Bands).	

18.3	Optical port access security, RS-485	Security of operation via optical port shall be ensured by passwords of the following access levels: Only reading. Reading and writing. Reading and writing only certain parameters by setting (configuration by setting). Saving logs of all operations (logs), for later monitoring.	
18.4	Local interface	The meter shall have standard optical port.	
19.	**Minimum requirments for functionality**		
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; • changing the connection sequence of phase and neutral current conductors. The metering device shall have resistance to the impact of external factors defined by IEC or GOST requirements, in case of exceeding the values defined by IEC or GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	
19.2	Ararms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage;	

		3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge; 8. There is differential current in the network; 9. Meter housing cover removed, for meters with demountable housing; 10. Restart by watchdog - program restart; 11. Software update error; 12. Measurement factor error - when calibrating the meter is used; 13. Incorrect phase and neutral connection. All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).	
19.3	Logging of all meter actions in the meter memory	All actions	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	
19.5	Interval data	The meter shall be able to save data at intervals of 15 min, 30 min, 60 min, day, month. The periodicity shall be configurable both locally and remotely.	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent; • overvoltage and undervoltage; • cosφ drop; • differential current exceedance. Exceeding and failure of the threshold value - the meter shall record this event in the event log and depending on the setting to trip the relay and record this event to: • transmit to the AMI system;	

		• transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • overcurrent. Limit value exceeding - the meter shall record this event in the event log and depending on the setting to: • transmit to the system; • transmit to the AMI system and trip the relay. When the limit value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter limit value as well as the meter response to the event shall be set (configured) both locally and remotely. The limiter shall operate in parallel and independently with the threshold values. It shall be possible to limit the limit with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU).	
20.	**Tariffs**	Operation with at least 4 tariffs shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	

21.	**Compatibility with the software of NEGK OJSC and DCPCS of KESC.**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

1.3 TYPE B: Three-phase meter for direct connection (main WB-PLC+RF communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4
1.	**Type of electricity meter**		
1.1	Type B: Three-phase meter of direct connection	Main communication channel WB-PLC+RF	
2.	**Standard compliance requirements**		
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-21 (or GOST 31819.21) IEC 62053-23 (or GOST 31819.23) GOST EN 50065-1 DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 IEEE 802.15.4-2020 and subsequent modifications of the above standards.	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU.	

		In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery. The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: -WB-PLC+RF - Relay tests -Climatic testing - the life cycle of the meter -for meter display -For battery	
2.3	Type B:	Inom 5A, Imax 100A.	
3.	**Basic parameters**		
3.1	Start-up current	0,4% I_b	
3.2	Rated voltage U_n	3x220/380-240/416V	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	0.8Un-1.15Un	
3.4	Frequency f_n	50Hz ±2%	
4.	**Overcurrent**		
4.1	Short circuit< 10msec	30xI_{max}	
5.	**Measuring accuracy**		
5.1	Active energy	1,0	
5.2	Reactive energy	2,0	
6.	**Climatic conditions**		
6.1	Operating temperature	-40°C … +70°C	
6.2	Storage tempetature	-40°C … +70°C	
7.	**Design requirements**		
7.1	Insulation strength	4 kV (Protection class II)	

7.2	Tightness	IP 54	
7.3	Method of connection to network cables	Screw connection	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	
7.5	Nameplate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic.	
8.	**Information display**		
8.1	Display type	LCD display	
8.2	Image clarity	during 20 years	
8.3	Display of measured values	1. At least 8 digits. 2. The display shall provide for the output of readings with at least 2 decimals.	

8.4	Display output format	Display information about the position of the load disconnect relay and the reason for tripping/activating it. The display should show information to recognize the reasons for the relay tripping: • Remote disconnection; • Exceeding the active power limit, current limit; • Other cases; After the cause of the trip has been eliminated, the display shall show that the relay is ready for connection. The display of the above information shall be agreed with the client at the time of contract conclusion.	
8.5	Possibility to display the main measured parameters with remote and local configuration	1. Measurement of active energy and power; 2. Measurement of reactive energy and power; 3. Mesurement of current voltage and current values by phase.	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	
8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy and kVArh for reactive energy	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	
8.9	Displaying readings in the absence of power supply (mains voltage)	The meter shall be capable of taking readings in the absence of external power supply	
8.10	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout.	

		Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	
9.	**Backup power supply**		
9.1	Battery	1. Battery with a guaranteed service life according to the verification interval, but at least 12 years. 2. The battery shall be replaceable without opening the meter housing.	
10.	**Meter memory**		
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minute interval in the amount of 4 values (parameters).	
11.	**Main load trip relay**		
11.1	Relay location	The main load trip relay shall be located in the meter housing.	
11.2	Max. switching voltage	U_n220V±20%	
11.3	Max. switching current	Max. meter current (I_{max})	
11.4	Number of no-load switching operations	At least 100,000 switching operations at rated voltage	
11.5	Number of switching operations at maximum load (in acc. with I_{max})	At least 10,000 switching operations at rated voltage	
11.6	Control of relay operation mode Control of relay operation mode	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode.	

		In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC or GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system.	
11.7	Relay control	The relay shall be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	
12.	**Internal clock**		
12.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	
12.2	Clock synchronization	Synchronization of the clock with the Center shall be performed via the remote communication channel (WB-PLC+RF) used in the system via the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	
13.	**Internal functions of the meter**		
13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter casing (in case of dismountable casing) regardless of the presence of mains voltage; - differential current exceed; - opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optical port, RS-485 port, WB-PLC+RF, GPRS; -electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC or GOST.	

		The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	
14.	**Sealing**		
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company); 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	
15.	**Service life**		
15.1	Average service life	At least 20 years	
16.	**Warranty**		
16.1	Warranty period	At least five years for all equipment	
16.2	Data collection	The supplier shall ensure 98% data collection via WB-PLC+RF communication cahnnel within one day and 100% within 3 days with the mandatory availability of supply voltage at the metering device.	
16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over WB-PLC+RF communication channel within 30 min.	
17.	**Local data exchange**		
17.1	Protocol of data exchnage	IEC 62056-21 DLMS/COSEM WB-PLC+RF Open protocols	
17.2	Local interface	The meter shall have standard optical port	
17.3	Access security via optic port, RS-485	1. Security of operation via optical port, RS-485 shall be ensured by passwords for the following access levels • Only reading; • Reading and writing;	

		• Reading and writing only certain parameters by setting (configuration by setting). 2. Saving logs of all operations (logs), for further monitoring.	
18.	**Remote data exchange**		
18.1	Main communication channel	The meter shall provide data transmission via WB-PLC+RF communication channel. Range up to 1500 meters between devices.	
18.2	Main communication channel	WB-PLC+RF	
18.2.1	Type of interface for communication channel	The meter shall have one WB-PLC+RF communication channel.	
18.2.2	Requirements for modem (module)	To provide the communication channel, the supplier shall equip a modem of the WB-PLC+RF standard: 1. RF - IEEE 802.15.4-2020 (863/866/870 MHz, operating mode #1 and #2, 915/915-a/915-b/915-c MHz, operating mode #1 and #3) 2. WB-PLC Frequency range 2~12MHz, 2-30MHz Data transmission speed up to 4 Mbps / 2~12MHz, 10Mbps / 2~30MHz The modem and interface output shall be located in the meter housing. The metering device shall have the functionality to flexibly configure them and automatically select the optimal channel (WB-PLC or RF) and ability to configure disconnection/connection of one of them (WB-PLC or RF).	
18.3	Optical port access security, RS-485	Security of operation via optical port shall be ensured by passwords of the following access levels: Only reading. Reading and writing. Reading and writing only certain parameters by setting (configuration by setting). Saving logs of all operations (logs), for further monitoring.	
18.4	Local interface	The meter shall have standard optical port.	

19.	**Minimum requirements for functionality**		
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; The metering device shall have resistance to the impact of external factors defined by IEC or GOST requirements, in case of exceeding the values defined by IEC or GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	
19.2	Alarms, recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge; 8. There is differential current in the network; 9. Meter housing cover removed, for meters with demountable housing; 10. Restart by watchdog - program restart; 11. Software update error; 12. Measurement factor error - when calibrating the meter is used; 13. No voltage on phase 1, 2, 3; 14. Incorrect phase connection	

		All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).	
19.3	Logging of all meter actions in the meter memory	All actions	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	
19.5	Interval data	The meter shall be able to save data at intervals of 15 min, 30 min, 60 min, day, month. The periodicity shall be configurable both locally and remotely.	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent; • overvoltage and undervoltage; • cosφ drop; • differential current exceedance. Exceeding and failure of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event to: • transmit to the AMI system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption;	

		• phase overcurrent. Exceeding and failure of limit value - the meter shall record this event in the event log and depending on the setting to: • transmit to the system; • transmit to the AMI system and trip the relay. When the limit value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter limit value as well as the meter response to the event shall be set (configured) both locally and remotely. The limit constraint shall operate in parallel and independently with the threshold values. It shall be possible to limit the limit with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU). The limiter shall operate on each phase and in three phases.	
20.	**Tariffs**	Operation with at least 4 tariffs (TOU) shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	
21.	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

1.4 TYPE B: Three-phase meter for direct connection (main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4

1.	**Type of electricity meter**		
1.1	Type B: Three-phase meter of direct connection	GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE), taking into account the generational changes in mobile communication technologies	
2.	**Standard compliance requirements**		
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-21 (or GOST 31819.21) IEC 62053-23 (or GOST 31819.23) DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 and subsequent modifications of the above standards	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU. In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery. The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: Relay tests -Climatic testing - the life cycle of the meter -for meter display -For battery	
2.3	Type B:	Inom 5A, Imax 100A.	

3.	**Basic parameters**		
3.1	Start-up current	0,4% I_b	
3.2	Rated voltage U_n	3x220/380-240/416V	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	-20%...+15%	
3.4	Frequency f_n	50Hz ±2%	
4.	**Overcurrent**		
4.1	Short circuit< 10msec	$30xI_{max}$	
5.	**Measuring accuracy**		
5.1	Active energy	1,0	
5.2	Reactive energy	2,0	
6.	**Climatic conditions**		
6.1	Operating temperature	-40°C … +70°C	
6.2	Storage tempetature	-40°C … +70°C	
7.	**Design requirements**		
7.1	Insulation strength	4 kV (protection class II)	
7.2	Tightness	IP 54	
7.3	Method of connection to network cables	Screw connection	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	
7.5	Nameplate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic.	
8.	**Information display**		
8.1	Display type	LCD display	
8.2	Image clarity	during 20 years	

8.3	Display of measured values	1. At least 8 digits. 2. The display shall provide for the output of readings with at least 2 decimals.	
8.4	Display output format	Display information about the position of the load disconnect relay and the reason for tripping/activating it. The display shall show information to recognize the reasons for the relay tripping: • Remote disconnection; • Exceeding the active power limit, current limit; • Other cases; After the cause of the trip has been eliminated, the display shall show that the relay is ready for connection. The display of the above information shall be agreed with the client at the time of contract conclusion.	
8.5	Possibility to display the main measured parameters with remote and local configuration	Measurement of energy and power. Measurement of current voltage and current values.	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	
8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy and kVArh for reactive energy	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	
8.9	Displaying readings in the absence of power supply (mains voltage)	The meter shall be capable of taking readings in the absence of external power supply	
8.10	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout. Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	

9.	**Backup power supply**		
9.1	Battery	1. Battery with a guaranteed service life according to the verification interval, but at least 12 years. 2. The battery shall be replaceable without opening the meter housing.	
10.	**Meter memory**		
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minute interval in the amount of 4 values (parameters).	
11.	**Main load trip relay**		
11.1	Relay location	The main load trip relay shall be located in the meter housing.	
11.2	Max. switching voltage	U_n220V±20%	
11.3	Max. switching current	Max. meter current (I_{max})	
11.4	Number of no-load switching operations	At least 100,000 switching operations at rated voltage	
11.5	Number of switching operations at maximum load (in acc. with I_{max})	At least 10,000 switching operations at rated voltage	
11.6	Relay operation mode control	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC or GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system.	

		In case of mains voltage (supply) failure or other failures, the meter shall transmit to the AMI system the latest data on active and reactive energy, data on the outage time and signals (alarms) recorded by the meter.	
11.7	Relay control	The relay should be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	
12.	**Internal clock**		
12.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	
12.2	Clock synchronization	Synchronization of the clock with the AMI system shall be performed via the remote communication channel (GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)), used in the system via DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	
13.	**Internal functions of the meter**		
13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter housing (in case of dismountable hausing) regardless of the presence of mains voltage; - differential current exceed; - opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optical port, RS-485 port, WB-PLC+RF, GPRS; - electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC or GOST. The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	

14.	**Sealing**		
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company); 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	
15.	**Service life**		
15.1	Average service life	At least 20 years	
16.	**Warranty**		
16.1	Warranty period	At least five years for all equipment	
16.2	Data collection	The supplier shall ensure 100% data collection via GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel within one day, with the mandatory availability of supply voltage at the metering device.	
16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel within 30 min.	
17.	**Local data exchange**		
17.1	Data exchange protocol	DLMS/COSEM EC 62056-21 Open protocols	
17.2	Local interface	The meter shall have standard optical port.	
17.3	Access security via optic port, RS-485	1. Security of operation via optical port, RS-485 shall be ensured by passwords for the following access levels: • Only reading; • Reading and writing; • Reading and writing only certain parameters by setting (configuration by setting). 2. Saving logs of all operations (logs), for further monitoring.	
18.	**Remote data exchange**		

18.1	Main communication channel	GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE). The meter shall support operation with static and dynamic IP addresses. The meter shall support transmission of data to the following systems: 1 – main native AMI system	
18.2	Type of interface for communication channel	The meter shall have one GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	
18.3	Requirements for modem (module)	To provide the main communication channel, the supplier shall equip a modem of the standard: GSM 2G (850, 900, 1800, 1900), UMTS 3G (850, 900, 1900, 2100), 4G (800(B20), 1800(B3), 2100(B1), 2300(B40), 2600(B7)). Category Cat1. or another standard of a class/generation higher Modem and interface output shall be located in the meter housing. Modems shall be interchangeable and universal between meter types (A, B, C, D).	
19.	**Minimum requirements for functionality**		
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; The metering device shall have resistance to the impact of external factors defined by IEC or GOST requirements, in case of exceeding the values defined by IEC or GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a functional (mechanism) for fixing or	

		determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	
19.2	Alarms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge; 8. There is differential current in the network; 9. Meter housing cover removed, for meters with demountable housing; 10. Restart by watchdog - program restart; 11. Software update error; 12. Measurement factor error - when calibrating the meter is used; 13. No voltage on phase 1, 2, 3; 14. Incorrect phase connection. All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).	
19.3	Logging of all meter actions in the meter memory	All actions	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	
19.5	Interval data	The meter shall be able to save data at intervals of 15 min, 30 min, day, month. The periodicity shall be configurable both locally and remotely.	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent; • overvoltage and undervoltage; • cosφ drop; • differential current exceedance. Exceeding and failure of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event to:	

		• transmit to the AMI system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • phase overcurrent. Exceeding and failure of limit value - the meter shall record this event in the event log and depending on the setting to: • transmit to the system; • transmit to the AMI system and trip the relay. When the limit value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter threshold as well as the meter response to the event shall be set (configured) both locally and remotely. The limit constraint shall operate in parallel and independently with the threshold values. It shall be possible to limit the limit with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU). The limiter shall operate on each phase and in three phases.	
19.8	Functions in case of mains voltage (power supply) failure of the metering device when using the GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	In case of mains voltage (supply) failure or other failures, the metering device shall transmit to the AMI system the latest data on active, reactive energy, data on the outage time and signals (alarms) recorded by the meter.	

19.9	Configuration by SMS when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	It shall be possible to configure GPRS settings for connection via GPRS + HSPA + LTE channel of the meter with AMI system: Server IP address Server port Server APN Online mode, wake-up mode Other GPRS parameters supported by the system	
20.	**Tariffs**	Operation with at least 4 tariffs (TOU) shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	
21.	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

1.5 TYPE C: Three-phase meter for semi-direct connection (Main WB-PLC+RF communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4
1.	**Type of electricity meter**		
1.1	Type C: Three-phase meter of semi-direct connection (through current transformers)	Main communication channel WB-PLC+RF	
2.	**Standard compliance requirements**		
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-22 (or GOST 31819.22) IEC 62053-24 (or GOST 31819.24) GOST EN 50065-1	

		DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 IEEE 802.15.4-2020 and subsequent modifications of the above standards.	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU. In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery. The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: -WB-PLC+RF - Relay tests - Climatic testing - The life cycle of the meter - For meter display - For battery	
2.3	Type C:	5(10)A	
3.	**Basic parameters**		
3.1	Start-up current	0,2% I_b	
3.2	Rated voltage U_n	3x220/380-240/416V	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	-20%...+15%	
3.4	Frequency f_n	50Hz ±2%	

4.	**Overcurrent**		
4.1	Short circuit< 10msec	$20xI_{max}$	
5.	**Measuring accuracy**		
5.1	Active ebergy	0,5S	
5.2	Reactive energy	1,0	
6.	**Climatic conditions**		
6.1	Operating temperature	-40°C … +70°C	
6.2	Storage temperature	-40°C … +70°C	
7.	**Design requirements**		
7.1	Insulation strength	4 kV (protection class II)	
7.2	Tightness	IP 54	
7.3	Method of connection to network cables	Screw /clamp-screw connection	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	
7.5	Nameplate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic.	
8.	**Information display**		
8.1	Display type	LCD display	
8.2	Image clarity	During 20 years	
8.3	Display of measured values	1. At least 8 digits. 2. The display shall provide for the output of readings with at least 2 decimals.	

8.4	Display output format	Display information about the position of the load disconnect relay and the reason for tripping/activating it. The display should show information to recognize the reasons for the relay tripping: • Remote disconnection; • Exceeding the active power limit, current limit; • Other cases; After the cause of the trip has been eliminated, the display shall show that the relay is ready for connection. The display of the above information shall be agreed with the client at the time of contract conclusion.	
8.5	Possibility to display the main measured parameters with remote and local configuration	1. Measurement of active energy and power; 2. Measurement of reactive energy and power; 3. Measurement of current voltage and current values by phases.	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	
8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy and kVArh for reactive energy	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	
8.9	Displaying readings in the absence of power supply (mains voltage)	The meter shall be capable of taking readings in the absence of external power supply	
8.10	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout.	

		Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	
9.	**Backup power supply**		
9.1	Battery	1. Battery with a guaranteed service life according to the verification interval, but at least 12 years. 2. The battery shall be replaceable without opening the meter housing.	
10.	**Meter memory**		
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minutes interval in the amount of 4 values (parameters).	
11.	**Main load trip relay**		
11.1	Relay location	Internal relay for controlling an external switching device (circuit breaker) of the main load (disconnection, locking in the disconnected position, switching on).	
11.2	Max. switching voltage	U_n220V±20%	
11.3	Relay switching current	5A at rated voltage	
11.4	Number of no-load switching operations	At least 10,000 switching operations at rated voltage	

11.5	Relay operation mode control	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC or GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system.	
11.6	Relay control	The relay should be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	
12	**Internal clock**		
12.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	
12.2	Clock synchronization	Synchronization of the clock with the AMI system shall be performed via the remote communication channel (WB-PLC+RF), used in the system via the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	
13.	**Internal functions of the meter**		

13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter housing (in case of dismountable housing) regardless of the presence of mains voltage; - differential current exceed; - opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optical port, RS-485 port, WB-PLC+RF, GPRS; - electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC or GOST. The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	
14.	**Sealing**		
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company); 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	
15.	**Service life**		
15.1	Average service life	At least 20 years	
16.	**Warranty**		
16.1	Warranty period	At least five years for all equipment	
16.2	Data collection	The supplier shall ensure 98% successfully processed requests for data collection via WB-PLC+RF communication channel within one day and 100% data within 3 days.	

16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over WB-PLC+RF communication channel within 30 min.	
17.	**Local data exchange**		
17.1	Data exchange protocol	DLMS/COSEM IEC 62056-21 WB-PLC+RF	
17.2	Local interface	The meter shall have standard oprical port, RS-485 interface.	
17.3	Access security via optic port, RS-485	1. Security of operation via optical port, RS-485 shall be ensured by passwords for the following access levels: • Only reading; • Reading and writing; • Reading and writing only certain parameters by setting (configuration by setting). 2. Saving logs of all operations (logs), for further monitoring.	
18.	**Remote data exchange**		
18.1	Communication channels	The meter shall provide data transmission via WB-PLC+RF communication channel. The range is up to 1500 m between devices.	
18.2	Main communication channel	WB-PLC+RF	
18.2.1	Type of interface for communication channel	The meter shall have one of the standard communication interfaces with open and standard protocol of data exchange for connection of modems (modules), providing WB-PLC+RF communication channel.	
18.2.2	Requirements for modem (module)	The supplier shall equip a WB-PLC+RF standard modem to provide the communication channel 1. RF - IEEE 802.15.4-2020 (863/866/870 MHz, operating mode #1 and #2, 915/915-a/915-b/915-c MHz, operating mode #1 and #3) 2. WB-PLC Frequency range:2~12MHz, 2-30MHz Data transmission speed up to	

		4 Mbps / 2~12MHz, 10Mbps / 2~30MHz The modem and interface output shall be located in the meter housing. The metering device shall have the functionality to flexibly configure them and automatically select the optimal channel (WB-PLC or RF) and ability to configure disconnection/connection of one of them (WB-PLC or RF). In case of award and conclusion of the contract, the Supplier shall negotiate RF frequencies (Bands).	
19.	**Minimum requirementsd for functionality**		
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; The metering device shall have resistance to the impact of external factors defined by IEC or GOST requirements, in case of exceeding the values defined by IEC or GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	
19.2	Alarms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge;	

		8. Meter housing cover removed, for meters with demountable housing; 9. Restart by watchdog - program restart; 10. Software update error; 11. Measurement factor error - when calibrating the meter is used; 12. No voltage on phase 1, 2, 3; 13. Incorrect phase connection; All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).	
19.3	Logging of all meter actions in the meter memory	All actions	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	
19.5	Interval data	The meter shall be able to save data at intervals of 15 min, 30 min, 60 min, day, month. The periodicity shall be configurable both locally and remotely.	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent; • overvoltage and undervoltage; • cosφ drop; • differential current exceedance. Exceeding and failure of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event to: • transmit to the AMI system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system;	

		• transmit to the AMI system and connect the relay. The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • phase overcurrent. Exceeding and failure of limit value - the meter shall record this event in the event log and depending on the setting to: • transmit to the system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter threshold as well as the meter response to the event shall be set (configured) both locally and remotely. The limiter shall operate in parallel and independently with the threshold values. It shall be possible to limit the limiter with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU). The limiter shall operate on each phase and on three phases.	
20.	**Tariffs**	Operation with at least 4 tariffs (TOU) shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	
21.	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and	

		Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

1.6 TYPE C: Three-phase meter for semi-direct connection
(Main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4
1.	**Electricity meter type**		
1.1	Type C: Three-phase meter of semi-direct connection (through current transformer)	GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE), taking into account the generational changes in mobile communication technologies	
2.	**Standard compliance requirements**		
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-22 (or GOST 31819.22) IEC 62053-24 (or GOST 31819.24) DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 and subsequent modifications of the above standards.	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU.	

		In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery. The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: - Relay tests - Climatic testing - The life cycle of the meter - For meter display - For battery	
2.3	Type C:	5(10)A	
3.	**Basic parameters**		
3.1	Start-up current	0,2% I_b	
3.2	Rated voltage U_n	3x220/380-240/416V	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	-20%...+15%	
3.4	Frequency f_n	50Hz ±2%	
4.	**Overcurrent**		
4.1	Short circuit< 10msec	$20xI_{max}$	
5.	**Measuring accuracy**		
5.1	Active energy	0,5S	
5.2	Reactive energy	1,0	
6.	**Climatic conditions**		
6.1	Operating temperature	-40°C … +70°C	
6.2	Storage temperature	-40°C … +70°C	
7.	**Design requirements**		
7.1	Insulation strength	4 kV (protection class II)	
7.2	Tightness	IP 54	
7.3	Method of connection to network cables	Screw/clamp-screw connection	

7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	
7.5	Nameplate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic.	
8.	**Information display**		
8.1	Display type	LCD display	
8.2	Image clarity	During 20 years	
8.3	Display of measured values	1. At least 8 digits. 2. The display shall provide for the output of readings with at least 2 decimals.	
8.4	Display output format	Display information about the position of the load disconnect relay and the reason for tripping/activating it. The display should show information to recognize the reasons for the relay tripping: • Remote disconnection; • Exceeding the active power limit, current limit; • Other cases; After the cause of the trip has been eliminated, the display shall show that the relay is ready for connection. The display of the above information shall be agreed with the client at the time of contract conclusion.	

8.5	Possibility to display the main measured parameters with remote and local configuration	1. Measurement of active energy and power; 2. Measurement of reactive energy and power; 3. Measurement of current voltage and current values by phases.	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	
8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy and kVArh for reactive energy	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	
8.9	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout. Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	
8.10	Displaying readings in the absence of power supply (mains voltage)	The meter shall be capable of taking readings in the absence of external power supply	
9.	**Backup power supply**		
9.1	Battery	1. Battery with a guaranteed service life according to the verification interval, but at least 12 years. 2. The battery shall be replaceable without opening the meter housing.	
10.	**Meter memory**		
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minutes interval in the amount of 4 values.	
11.	**Main load trip relay**		

11.1	Relay location	Internal relay for controlling an external switching device (automatic circuit breaker) of the main load (disconnection, locking in the disconnected position, switching on).	
11.2	Max. switching voltage	U_n220V±20%	
11.3	Relay switching current	5A at rated voltage	
11.4	Number of no-load switching operations	At least 10,000 switching operations at rated voltage	
11.5	Relay operation mode control	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC or GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system. In case of mains voltage (supply) failure or other failures, the meter shall transmit to the AMI system the latest data on active, reactive energy, data on the time of outage and signals (alarms) recorded by the meter.	
11.6	Relay control	The relay should be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	
12.	**Internal clock**		
12.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	
12.2	Clock synchronization	Synchronization of the clock with the AMI system shall be performed via the remote communication channels (GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)), used in the system via	

		the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	
13.	**Internal functions of the meter**		
13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter housing (in case of dismountable housing) regardless of the presence of mains voltage; - differential current exceed; - opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optical port, RS-485 port, PLC, GPRS; - electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC or GOST. - The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	
14.	**Sealing**		
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company); 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	
15.	**Service life**		
15.1	Average service life	At least 20 years	
16.	**Warranty**		

16.1	Warranty period	At least five years for all equipment	
16.2	Data collection	The supplier shall ensure 100% data collection via GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel within one day with the mandatory presence of supply voltage at the metering device.	
16.3	Remote switching on/off of the relay	The Supplier shall ensure 100% relay off/on over GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channels within 30 min.	
17.	**Local data exchange**		
17.1	Data exchange protocol	DLMS/COSEM IEC 62056-21 Open protocols	
17.2	Local interface	The meter shall have standard optical port.	
17.3	Access security via optical port, RS-485	1. Security of operation via optical port, RS-485 shall be ensured by passwords for the following access levels: • Only reading; • Reading and writing; • Reading and writing only certain parameters by setting (configuration by setting). 2. Saving logs of all operations (logs), for further monitoring.	
18.	**Remote data exchange**		
18.1	Communication channels	The meter shall provide data transmission via GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) main communication channel. The meter shall support data transmission to the following systems: 1 – main native AMI system.	
18.2	Main communication channel	To provide the main communication channel, the supplier shall equip a modem of the GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) standard. Modem and interface output shall be located in the meter housing. Protection against unauthorized access to the module (modem) and interface shall be provided.	

18.2.1	Requirements for modem (module)	To provide the main communication channel, the supplier shall equip a modem of the standard: GSM 2G (850, 900, 1800, 1900), UMTS 3G (850, 900, 1900, 2100), 4G (800(B20), 1800(B3), 2100(B1), 2300(B40), 2600(B7)). Category Cat1. or another standard of a class/generation higher Modem and interface output shall be located in the meter housing. Modems shall be interchangeable and universal between meter types (A, B, C, D).	
19.	**Minimum requirements for functionality**		
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; The metering device shall have resistance to the impact of external factors defined by IEC or GOST requirements, in case of exceeding the values defined by IEC or GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	
19.2	Alarms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic);	

		7. Impact of electrostatic discharge; 8. Meter housing cover removed, for meters with demountable housing; 9. Restart by watchdog - program restart; 10. Software update error; 11. Measurement factor error - when calibrating the meter is used; 12. No voltage on phase 1, 2, 3; 13. Incorrect phase connection; All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).	
19.3	Logging of all meter actions in the meter memory	All actions	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	
19.5	Interval data	The meter shall be able to save data at intervals of 15 min, 30 min, 60 min, day, month. The periodicity shall be configurable both locally and remotely.	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent; • overvoltage and undervoltage; • cosφ drop; • differential current exceedance. Exceeding and failure of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event to: • transmit to the AMI system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system;	

		• transmit to the AMI system and connect the relay. The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • phase overcurrent. Exceeding and failure of limit value - the meter shall record this event in the event log and depending on the setting to: • transmit to the system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter threshild value as well as the meter response to the event shall be set (configured) both locally and remotely. The limiter shall operate in parallel and independently with the threshold values. It shall be possible to limit the limiter with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU). The limiter shall operate on each phase and in three phases.	
19.8	Functions in case of network voltage (power supply) failure of the meter when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	In case of mains voltage (supply) failure or other failures, the metering device shall transmit to the AMI system the latest data on active, reactive energy, data on the outage time and signals (alarms) recorded by the meter.	
19.9		It should be possible to configure GPRS settings for connection via GPRS + HSPA +LTE channel of the meter with AMI system: Server IP address	

	Configuration by SMS when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	Server port Server APN Online mode, wake-up mode Other GPRS parameters supported by the system	
20.	**Tariffs**	Operation with at least 4 tariffs (TOU) shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	
21.	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

1.7. TYPE D: Three-phase meter for indirect connection 100 V, 5(10)A
(Main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4
1.	**Electricity meter type**		
1.1	Type D: Three-phase meter of indirect connection with three measuring elements (through current transformers and voltage transformers)	Main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	
2.	**Standard compliance requirements**		
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-22 (or GOST 31819.22) IEC 62053-24 (or GOST 31819.24) DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61	

		IEC 62056-21 and subsequent modifications of the above standards.	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU. In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery. The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: - Relay tests - Climatic testing - The life cycle of the meter - For meter display - For battery	
2.3	Тип D:	5(10)A	
3.	**Basic parameters**		
3.1	Start-up current	0,001 x I_{nom}	
3.2	Rated voltage U_n	3x57.7/100V	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	-20%...+15%	
3.4	Frequency f_n	50Hz ±2%	
4.	**Overcurrent**		
4.1	Short circuit<10msec	20xI_{max}	
5.	**Measuring accuracy**		
5.1	Active energy	0,2S	
5.2	Reactive energy	0,5	
6.	**Climatic conditions**		

6.1	Operating temperature	-40°C … +70°C	
6.2	Storage temperature	-40°C … +70°C	
7.	**Design reqirements**		
7.1	Insulation strength	4 kV (protection class II)	
7.2	Tightness	IP 54	
7.3	Method of connection to network cables	Screw, clamp-screw connection	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	
7.5	Nameplate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic.	
8.	**Information display**		
8.1	Display type	LCD display or any other	
8.2	Image clarity	During 20 years	
8.3	Display of measured values	1. At least 8 digits. 2. The display shall provide for the output of readings with at least 3 decimals.	
8.4	Display output format	Display information about the position of the load disconnect relay (at the request of the power company)	
8.5	Possibility to display the main measured parameters with remote and local configuration	1. Measurement of forward and reverse direction active energy and power 2. Forward and reverse reactive energy and power measurement 3. Measurement of current voltage and current values by phases.	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	

8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy and kVArh for reactive energy	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	
8.9	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout. Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	
8.10	Displaying readings in the absence of power supply (mains voltage)	The meter shall be capable of taking readings in the absence of external power supply	
9.	**Backup power supply**		
9.1	Battery	1. Battery with a guaranteed service life according to the verification interval, but at least 12 years. 2. The battery shall be replaceable without opening the meter housing.	
9.2	Backup power supply	The meter shall have terminals for auxiliary power supply (AC)	
10.	**Meter memory**		
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minutes interval in the amount of 4 values.	
11.	**Relay**		
11.1	Relay location	Internal relay for controlling an external switching device (automatic circuit breaker) of the main load (disconnection, locking in the disconnected position, switching on).	
11.2	Max. switching voltage	U_n220V±20%	
11.3	Relay switching current	5A at rated voltage	
11.4	Number of no-load switching operations	At least 10,000 switching operations at rated voltage	

11.5	Relay operation mode control	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC or GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system. In case of mains voltage (supply) failure or other failures, the meter shall transmit to the AMI system the latest data on active, reactive energy, data on the time of outage and signals (alarms) recorded by the meter.	
11.6	Relay control	The relay should be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	
12.	**Internal clock**		
12.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	
12.2	Clock synchronization	Synchronization of the clock with the AMI system shall be performed via the remote communication channel (RS-485, Ethernet/ GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)), used in the system via the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	
13.	**Internal functions of the meter**		
13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter housing (in case of dismountable housing) regardless of the presence of mains voltage;	

		- opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optical port, RS-485 port, GPRS; - electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC or GOST. The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	
14.	**Sealing**		
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company); 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	
15.	**Service life**		
15.1	Average service life	At least 20 years	
16.	**Warranty**		
16.1	Warranty period	At least five years for all equipment	
16.2	Data collection	Supplier shall ensure 100% of successfully processed data collection requests over GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel.	
16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channels within 20 min.	
17.	**Local data exchange**		
17.1	Data exchange protocol	DLMS/COSEM	

		IEC 62056-21 Open protocols	
17.2	Local interface	The meter shall have standard optical port, RS-485	
17.3	Access security via optical port, RS-485	1. Security of operation via optical port, RS-485 shall be ensured by passwords: • Only reading; • Reading and writing; • Reading and writing only certain parameters by setting (configuration by setting). 2. Saving logs of all operations (logs), for further monitoring.	
18.	**Remote data exchange**		
18.1	Communication channels	The meter shall provide data transmission via GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) main communication channel. The meter shall support data transmission to two systems: 1 – main native AMI system; 2 – MDMS system (KESC DCPCS) for reading with direct request capability The meter shall support operation with static and dynamic IP addresses.	
18.2	Main communication channel	GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)	
18.2.1	Requirements for modem(module)	To provide the main communication channel, the supplier shall equip a modem of the following standard: GSM 2G (850, 900, 1800, 1900), UMTS 3G (850, 900, 1900, 2100), 4G (800(B20), 1800(B3), 2100(B1), 2300(B40), 2600(B7)). Category Cat1. or another standard of a class/generation higher Modem and interface output shall be located in the meter housing. Modems shall be interchangeable and universal between meter types (A, B, C, D).	

19.	**Minimum requirements for functionality**		
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; The metering device shall have resistance to the impact of external factors defined by IEC or GOST requirements, in case of exceeding the values defined by IEC or GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	
19.2	Alarms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge; 8. Meter housing cover removed, for meters with demountable housing; 9. Restart by watchdog - program restart; 10. Software update error; 11. Measurement factor error - when calibrating the meter is used; 12. No voltage on phase 1, 2, 3; 13. No current on phase 1,2,3; 14. Incorrect phase connection; All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no	

		communication, the meter shall transmit all alarms at the first opportunity (communication availability).	
19.3	Logging of all meter actions in the meter memory	All actions	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	
19.5	Interval data	The meter shall be able to save data at intervals of 30 min, day, month. The periodicity shall be configurable both locally and remotely.	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent; • overvoltage and undervoltage; • cosφ drop; Exceeding and failure of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event to: • transmit to the AMI system; • transmit to the AMI system and trip the relay (upon request) When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay (upon request). The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • phase overcurrent. Exceeding and failure of threshold value - the meter shall record this event in the event log and depending on the setting to:	

		• transmit to the system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter threshold value as well as the meter response to the event shall be set (configured) both locally and remotely. The limiter shall operate in parallel and independently with the threshold values. It shall be possible to limit the limiter with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU). The limiter shall operate on each phase and in three phases.	
19.8	Functions in case of network voltage (power supply) failure of the meter when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	In case of mains voltage (supply) failure or other failures, the metering device shall transmit to the AMI system the latest data on active, reactive energy, data on the outage time and signals (alarms) recorded by the meter.	
19.9	Configuration by SMS when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	It should be possible to configure GPRS settings for connection via GPRS + HSPA + LTE channel of the meter with AMI system: Server IP address Server port Server APN Online mode, wake-up mode Other GPRS parameters supported by the system	
20.	**Tariffs**	Operation with at least 4 tariffs (TOU) shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	
21.	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

1.8. TYPE D: Three-phase meter for indirect connection 100 V, 5(10)A
(Main RS-485 communication channel)

Item No.	Table of technical requirements	Client's requirement	M – Mandatory, P - Preferrable	Offered by Bidder
1	2	3	4	5
1.	**Electricity meter type**			
1.1	Type D: Three-phase meter of indirect connection with three measuring elements (through current transformers and voltage transformers)	Main RS-485 communication channel	M	
2.	**Standard compliance requirements**			
2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-22 (or GOST 31819.22) IEC 62053-24 (or GOST 31819.24) DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 and subsequent modifications of the above standards.	M	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU. In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery.	M	

		The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: - Relay tests - Climatic testing - The life cycle of the meter - For meter display - For battery		
2.3	Тип D:	5(10)A	M	
3.	**Basic parameters**			
3.1	Start-up current	0,001 x I_{nom}	M	
3.2	Rated voltage U_n	3x57.7/100V	M	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	-20%...+15%	M	
3.4	Frequency f_n	50Hz ±2%	M	
4.	**Overcurrent**			
4.1	Short circuit<10msec	20xI_{max}	M	
5.	**Measuring accuracy**			
5.1	Active energy	0,2S	M	
5.2	Reactive energy	0,5	M	
6.	**Climatic conditions**			
6.1	Operating temperature	-40°C … +70°C	M	
6.2	Storage temperature	-40°C … +70°C	M	
7.	**Design reqirements**			
7.1	Insulation strength	4 kV (protection class II)	M	
7.2	Tightness	IP 54	M	
7.3	Method of connection to network cables	Screw, clamp-screw connection	M	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover.	M	

		The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.		
7.5	Nameplate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers. Material: metal or plastic.	M	
8.	**Information display**			
8.1	Display type	LCD display or any other	M	
8.2	Image clarity	During 20 years	M	
8.3	Display of measured values	1. At least 8 digits. 2. The display shall provide for the output of readings with at least 3 decimals.	M	
8.4	Display output format	Display information about the position of the load disconnect relay (at the request of the power company)	M	
8.5	Possibility to display the main measured parameters with remote and local configuration	1. Measurement of forward and reverse direction active energy and power 2. Forward and reverse reactive energy and power measurement 3. Measurement of current voltage and current values by phases.	M	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	M	

8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy and kVArh for reactive energy	M	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	M	
8.9	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout. Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	M	
8.10	Displaying readings in the absence of power supply	The meter shall be capable of taking readings in the absence of external power supply	M	
9.	**Backup power supply**			
9.1	Battery	1. Battery with a guaranteed service life according to the verification interval, but at least 6 years. 2. The battery shall be replaceable without opening the meter housing.	M	
9.2	Backup power supply	The meter shall have terminals for auxiliary power supply (AC)	M	
10.	**Meter memory**			
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minutes interval in the amount of 4 values.	M	
11.	**Relay**			
11.1	Relay location	Internal relay for controlling an external switching device (automatic circuit breaker) of	M	

		the main load (disconnection, locking in the disconnected position, switching on).		
11.2	Max. switching voltage	U_n220V±20%	M	
11.3	Relay switching current	5A at rated voltage	M	
11.4	Number of no-load switching operations	At least 10,000 switching operations at rated voltage	M	
11.5	Relay operation mode control	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC and GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system.	M	
11.6	Relay control	The relay should be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	M	
12.	**Internal clock**			
12.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	M	
12.2	Clock synchronization	Synchronization of the clock with the Center shall be performed via the remote	M	

		communication channel (RS-485), used in the system via the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.		
13.	**Internal functions of the meter**			
13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter housing (in case of dismountable housing) regardless of the presence of mains voltage; - opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optical port, RS-485 port, GPRS; - electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC and GOST. The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.	M	
14.	**Sealing**			
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company);	M	

		2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.		
15.	**Service life**			
15.1	Average service life	At least 20 years	M	
16.	**Warranty**			
16.1	Warranty period	At least five years for all equipment	M	
16.2	Data collection	Supplier shall ensure 100% of successfully processed data collection requests over RS-485 communication channel.	M	
16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over RS-485 communication channels within 20 min.	M	
17.	**Local data exchange**			
17.1	Data exchange protocol	DLMS/COSEM IEC 62056-21 Open protocols	M	
17.2	Local interface	The meter shall have standard optical port, RS-485	M	
17.3	Access security via optical port, RS-485	1. Security of operation via optical port, RS-485 shall be ensured by passwords for the following access levels: • Only reading; • Reading and writing; • Reading and writing only certain parameters by setting (configuration by setting). 2. Saving logs of all operations (logs), for further monitoring.	M	
18.	**Remote data exchange**			

18.1	Main communication channel	RS-485	M	
18.2	Number of RS-485 interfaces	2 (AMI, SCADA)	M	
19.	**Minimum requirements for functionality**			
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; The metering device shall have resistance to the impact of external factors defined by IEC and GOST requirements, in case of exceeding the values defined by IEC and GOST (impact of external magnetic, electrostatic discharge, etc.), there shall be a functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).	M	
19.2	Alarms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge;	M	

		8. Meter housing cover removed, for meters with demountable housing; 9. Restart by watchdog - program restart; 10. Software update error; 11. Measurement factor error - when calibrating the meter is used; 12. No voltage on phase 1, 2, 3; 13. No current on phase 1,2,3; 14. Incorrect phase connection; All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).		
19.3	Logging of all meter actions in the meter memory	All actions	M	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	M	
19.5	Interval data	The meter shall be able to save data at intervals of 15 min, 30 min, 60 min, day, month. The periodicity shall be configurable both locally and remotely.	M	
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent; • overvoltage and undervoltage; • cosφ drop and exceedance; Exceeding and drop of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event to: • transmit to the AMI system;	M	

		• transmit to the AMI system and trip the relay (upon request) When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay (upon request). The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.		
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • phase overcurrent and phase current drop. Exceeding and failure of threshold value - the meter shall record this event in the event log and depending on the setting to: • transmit to the system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter threshold value as well as the meter response to the event shall be set (configured) both locally and remotely.	M	

		The limiter shall operate in parallel and independently with the threshold values. It shall be possible to limit the limiter with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU). The limiter shall operate on each phase and in three phases.		
20.	**Tariffs**	Operation with at least 4 tariffs (TOU) shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	M	
21.	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	M	

1.9. TYPE D: Three-phase meter for indirect connection 100 V, 5(10)A
(Main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel)

Item No.	Table of technical requirements	Client's requirement	M – Mandatory, P - Preferrable	Offered by Bidder
1	2	3	4	5
1.	**Electricity meter type**			
1.1	Type D: Three-phase meter of indirect connection with three measuring elements (through current transformers and voltage transformers)	Main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	M	
2.	**Standard compliance requirements**			

2.1	Standards	Adopted in the Kyrgyz Republic: IEC, GOST, EN IEC 61010-1 (or GOST 12.2.091) IEC 62052-11 (or GOST 31818.11) IEC 62053-22 (or GOST 31819.22) IEC 62053-24 (or GOST 31819.24) DLMS UA 1000 -1 DLMS UA 1000 -2 IEC 62056-61 IEC 62056-21 and subsequent modifications of the above standards.	M	
2.2	Certificates	The Supplier shall submit to the tender a type certificate of conformity for the meter from an internationally accredited laboratory recognized in the Kyrgyz Republic and the EAEU. In case of award and conclusion of the contract, the Supplier shall enter the supplied meter type into the Register of Measuring Instruments of the Kyrgyz Republic prior to delivery. The meter manufacturer shall have a quality certificate in accordance with ISO 9001. The meter manufacturer shall provide certificates from an internationally accredited laboratory for: - Relay tests - Climatic testing - The life cycle of the meter - For meter display - For battery	M	
2.3	Тип D:	5(10)A	M	
3.	**Basic parameters**			

3.1	Start-up current	0,001 x I_{nom}	M	
3.2	Rated voltage U_n	3x57.7/100V	M	
3.3	Extended range of operating phase voltage at which the meter's operation in the accuracy class is ensured.	-20%...+15%	M	
3.4	Frequency f_n	50Hz ±2%	M	
4.	**Overcurrent**			
4.1	Short circuit<10msec	20xI_{max}	M	
5.	**Measuring accuracy**			
5.1	Active energy	0,2S	M	
5.2	Reactive energy	0,5	M	
6.	**Climatic conditions**			
6.1	Operating temperature	-40°C … +70°C	M	
6.2	Storage temperature	-40°C … +70°C	M	
7.	**Design reqirements**			
7.1	Insulation strength	4 kV (protection class II)	M	
7.2	Tightness	IP 54	M	
7.3	Method of connection to network cables	Screw, clamp-screw connection	M	
7.4	Meter cover and terminal box	Removal of the meter cover shall only be possible after removing the terminal box cover. The terminal box material shall be of corrosion-resistant metal, strong, not oxidizing when in contact with aluminum and copper.	M	
7.5	Nameplate	In case of award and conclusion the contract, at the request of the procuring organization, the nameplate shall contain the logo of the power company. The barcode shall include data as agreed with the power company. All inscriptions shall be made industrially (offset printing, engraving, laser engraving, etc.) without the use of any stickers.	M	

		Material: metal or plastic.		
8.	**Information display**			
8.1	Display type	LCD display or any other	M	
8.2	Image clarity	During 20 years	M	
8.3	Display of measured values	1. At least 8 digits. 2. The display shall provide for the output of readings with at least 3 decimals.	M	
8.4	Display output format	Display information about the position of the load disconnect relay	M	
8.5	Possibility to display the main measured parameters with remote and local configuration	1. Measurement of forward and reverse direction active energy and power 2. Forward and reverse reactive energy and power measurement 3. Measurement of current voltage and current values by phases.	M	
8.6	Possibility to display all measured parameters with remote and local configuration	Various other parameters	M	
8.7	Measuring units	Data on consumed energy shall be displayed in kWh for active energy and kVArh for reactive energy	M	
8.8	Value coding	The displayed values shall be accompanied by the appropriate OBIS code	M	
8.9	Display screen backlighting	The meter display shall have a backlit screen. It shall be possible to turn the backlight on/off permanently and by timeout. Configuration of backlight on/off continuously and by timeout shall be available locally and remotely.	M	
8.10	Displaying readings in the absence of power supply	The meter shall be capable of taking readings in the absence of external power supply	M	
9.	**Backup power supply**			

9.1	Battery	1. Battery with a guaranteed service life according to the verification interval, but at least 12 years. 2. The battery shall be replaceable without opening the meter housing.	M	
9.2	Backup power supply	The meter shall have terminals for auxiliary power supply (AC)	M	
10.	**Meter memory**			
10.1	Non-volatile memory	Non-volatile memory for storing basic parameters with date and time stamp. The depth of information storage is not less than 60 days at 30 minutes interval in the amount of 4 values.	M	
11.	**Main load disconnection relay (only if required by the purchasing organization)**			
11.1	Relay location	Internal relay for controlling an external switching device (automatic circuit breaker) of the main load (disconnection, locking in the disconnected position, switching on).	M	
11.2	Max. switching voltage	U_n220V±20%	M	
11.3	Relay switching current	5A at rated voltage	M	
11.4	Number of no-load switching operations	At least 10,000 switching operations at rated voltage	M	
11.5	Relay operation mode control	It shall be possible to configure the Relay ControlMode both locally and remotely. The relay shall be switched on by setting according to the relay operation mode: by pressing the button or automatically depending on the configured relay operation mode. The relay shall be switched on only after an enabling command from the AMI system or after the cause of relay tripping has been	M	

		eliminated, depending on the configured relay operating mode. In case of detection of external magnetic field, electrostatic discharge exceeding the values according to IEC and GOST, the relay shall be switched off and its operation shall be blocked. The relay shall be switched on only after an authorizing command from the AMI system. In case of mains voltage (supply) outage or other failures, the meter shall transmit to the AMI system the latest active, reactive energy data, outage time data and alarms recorded by the meter.		
11.6	Relay control	The relay should be switched on both locally and remotely according to the relay operating mode (Relay ControlMode).	M	
12.	**Internal clock**			
12.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	M	
12.2	Clock synchronization	Synchronization of the clock with the Center shall be performed via the remote communication channel (RS-485, Ethernet/GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)), used in the system via the DLMS/COSEM protocol. Ability to remotely adjust time and time zone in manual/automatic input mode.	M	
13.	**Internal functions of the meter**			
13.1	The meter shall have the following events recorded and transmitted to the AMI system	- opening of the meter housing (in case of dismountable housing) regardless of the presence of mains voltage;	M	

		- opening the meter terminal cover regardless of the presence of mains voltage; - failure or malfunction of the watch movement; - over-voltage and undervoltage; - attempt of unauthorized access to optical port, RS-485 port, GPRS; - electrostatic discharge; - Emergency or abnormal overloading of the meter; - presence of magnetic field (alternating, direct and electromagnetic), electrostatic discharge exceeding the values according to IEC and GOST. The signaling to the AMI system and the switching off/on of the relay shall be set (configured) both locally and remotely.		
14.	**Sealing**			
14.1	The meter shall have the following seals	In case of award and conclusion of the contract: 1. The number of number seals shall correspond to the design of the meter housing (the type of seals shall be agreed with the power company); 2. The seal of the State verification shall comply with the current legislation of the Kyrgyz Republic.	M	
15.	**Service life**			
15.1	Average service life	At least 20 years	M	
16.	**Warranty**			
16.1	Warranty period	At least five years for all equipment	M	
16.2	Data collection	Supplier shall ensure 100% of successfully processed data collection requests over GSM	M	

		2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel.		
16.3	Remote switching off/on of the relay	The Supplier shall ensure 100% relay off/on over GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channels within 20 min.	M	
17.	**Local data exchange**			
17.1	Data exchange protocol	DLMS/COSEM IEC 62056-21 Open protocols		
17.2	Local interface	The meter shall have standard optical port, RS-485	M	
17.3	Access security via optical port, RS-485	1. Security of operation via optical port, RS-485 shall be ensured by passwords: • Only reading; • Reading and writing; • Reading and writing only certain parameters by setting (configuration by setting). 2. Saving logs of all operations (logs), for further monitoring.	M	
18.	**Remote data exchange**			
18.1	Communication channels	The meter shall provide data transmission via main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel. The meter shall support data transmission to two systems: 1. Main native AMI system with MDMS functions, 2. MDMS system (DCPCS of KESC) for reading with ability of direct request.	M	

		The meter shall support operation with static and dynamic IP addresses.		
18.2	Main communication channel	GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE)	M	
18.2.1	Requirements for modem (module)	To provide main communication channel the supplier shall equip a modem of the standard: GSM 2G (850, 900, 1800, 1900) UMTS 3G (850, 900, 1900, 2100), 4G (800(B20), 1800(B3), 2100(B1), 2300(B40), 2600(B7)). Category not lower than Cat1. or other standard grade/generation higher. Modem and interface output shall be located in the meter housing. Modems shall be interchangeable and universal between types of meters (A, B, C, D).	M	
19.	**Minimum requirements for functionality**			
19.1	Protection functions against unauthorized access to the meter and change of the switching scheme	The meter shall have a storage memory with a depth of at least 600 records: 1. Registration of opening of the meter cover and terminal box, with recording in the event log; 2. Registration in the accuracy class of the consumed electricity at: • Reverse connection; • changing the direction of current circuits; The metering device shall have resistance to the impact of external factors defined by IEC and GOST requirements, in case of exceeding the values defined by IEC and GOST (impact of external magnetic, electrostatic discharge, etc.),	M	

		there shall be a functional (mechanism) for fixing or determining the presence of external unauthorized impact to affect the operation of the metering device (with recording in the event log).		
19.2	Alarms recorded by the meter	1. Failure of the clock mechanism; 2. Low battery voltage; 3. Unauthorized connection to the local optical port; 4. The configuration has been reconfigured; 5. Meter terminal cover removed; 6. Exposure to magnetic fields (alternating, direct, electromagnetic); 7. Impact of electrostatic discharge; 8. Meter housing cover removed, for meters with demountable housing; 9. Restart by watchdog - program restart; 10. Software update error; 11. Measurement factor error - when calibrating the meter is used; 12. No voltage on phase 1, 2, 3; 13. No current on phase 1,2,3; 14. Incorrect phase connection; All alarms shall be transmitted to the AMI system upon request regardless of the communication channel. If there is no communication, the meter shall transmit all alarms at the first opportunity (communication availability).	M	
19.3	Logging of all meter actions in the meter memory	All actions	M	
19.4	Instantaneous data	The meter shall be able to transmit all available parameters on request in ON-LINE mode	M	
19.5	Interval data	The meter shall be able to save data at intervals of 30 min, day, month.	M	

		The periodicity shall be configurable both locally and remotely.		
19.6	Thresholds	The meter shall enable operation with set threshold values of the following parameters: • overcurrent and current drop; • overvoltage and undervoltage; • cosφ drop and exceedance; Exceeding and drop of the threshold value - the meter shall record this event in the event log and depending on the setting trip the relay and record this event to: • transmit to the AMI system; • transmit to the AMI system and trip the relay (upon request) When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay (upon request). The threshold value of the parameter, as well as the meter's response to the event, shall be set (configured) both locally and remotely. Threshold values shall operate in parallel and independently with the limiter.	M	
19.7	Limiters	The meter shall enable operation with set limits of the following parameters: • exceeding active power consumption; • phase overcurrent and phase current drop. Exceeding and failure of threshold value - the meter shall record this event in the event log and depending on the setting to:	M	

		• transmit to the system; • transmit to the AMI system and trip the relay. When the threshold value is normalized - the meter shall record this event in the event log and depending on the setting to: • transmit to the AMI system; • transmit to the AMI system and connect the relay. The parameter threshold value as well as the meter response to the event shall be set (configured) both locally and remotely. The limiter shall operate in parallel and independently with the threshold values. It shall be possible to limit the limiter with different threshold values on a scheduled basis during the day (peak hours, daytime, nighttime, etc.) with a floating schedule depending on the month and season (linked to TOU). The limiter shall operate on each phase and in three phases.		
19.8	Functions in case of mains voltage (power supply) failure of the metering device when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	In case of mains voltage (supply) outage or other failures, the metering device shall transmit to the AMI system the latest data on active, reactive energy, data on the outage time and signals (alarms) recorded by the meter.	M	
19.9	Configuration by SMS when using GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel	It shall be possible to configure GPRS settings for connection via GPRS + HSPA + LTE channel of the meter with AMI system: Server IP address Server port Server APN Online mode, Wake-up mode	M	

		Other GPRS parameters supported by the system		
20.	**Tariffs**	Operation with at least 4 tariffs (TOU) shall be ensured. Possibility of seasonal configuration of tariffs for at least 12 seasons.	M	
21.	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with MDMS system of NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	M	

2.1 Data concentrator for WB-PLC+RF + RS-485 meters
(Main GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) + Ethernet communication channel)

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1	2	3	4
1.	**Standard compliance requirements**		
1.1	Standards	WB-PLC+RF DLMS/COSEM GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) IEEE 802.15.4-2020 or another standard of a higher class/generation	
2.	**Basic parameters**		
2.1	Rated voltage Un	3x220/380-240/416 V	

2.2	Frequency fn	50 Hz ±2%	
3.	**Climatic conditions**		
3.1	Operating temperature	-40°C … +70°C	
3.2	Storage temperature	-40°C … +70°C	
4.	**Design requirements**		
4.1	Tightness	IP 54	
4.2	Nameplate	In case of award and conclusion of the contract, if requested by the procuring organization: -shall contain the logo of the power company; - the barcode shall include data as agreed with the power company.	
5.	**Memory**		
5.1	Non-volatile memory	Availability of non-volatile memory ensuring storage of data with date and time stamp.	
6.	**Internal clock**		
6.1	Clock accuracy	Permissible deviation max. 0.5 sec per day under normal conditions.	
6.2	Clock synchronisation	Synchronization of the clock with the AMI system shall be performed via the remote communication channel GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE), Ethernet (RJ-45)), used in the system via the DLMS/COSEM protocol.	
7.	**Service life**		
7.1	Average service life	At least 20 years	
8.	**Warranty**		
8.1	Warranty period	At least five years for all equipment	
9.	**Local data exchange**		
9.1	Local interface	Data concentrator shall have Ethernet port RJ-45, USB port, PLC+RF, RS-485 interface.	

9.2	Data exchange protocol	TCP\IP DLMS\COSEM Open protocols	
9.3	Access security	Security shall be ensured by passwords	
10.	**Remote data exchange with the meter**		
10.1	Communication channels	The data concentrator shall provide data transmission via WB-PLC+RF communication channel. The range is up to 1500 m between devices.	
10.2	Main communication channel	WB-PLC+RF	
10.3	Requirements for modem (module)	The supplier shall equip a WB-PLC+RF standard modem to provide a communication channel. 1. RF - IEEE 802.15.4-2020 (863/866/870 MHz, operating mode #1 and #2, 915/915-a/915-b/915-c MHz, operating mode #1 and #3) 2. WB-PLC Frequency range 2~12MHz, 2-30MHz Data transfer speed up to 4 Mbps / 2~12MHz, 10Mbps / 2~30MHz The modem and interface output shall be located in the data concentrator housing. The data concentrator shall have the functionality to flexibly configure them and automatically select the optimal channel (WB-PLC or RF) and have ability to configure disconnection?connection of one of them (WB-PLC or RF). In case of award and contract conclusion the supplier shall coordinate RF frequencies (Bands).	
11.	**Remote data exchange with server**		
11.1	Communication channels	The data concentrator shall have two communication channels (primary, backup): -GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE);	

		-Ethernet. The data concentrator shall have the functionality to flexibly configure them and automatically select the optimal channel. The data concentrator shall support transmission of data to the following systems: 1 – main native AMI system.	
11.2	Requirements for modem	To provide a GSM 2G (GPRS) + UMTS 3G (HSPA) + 4G (LTE) communication channel, the modem shall be of the standard: GSM 2G (850, 900, 1800, 1900) UMTS 3G (850, 900, 1900, 2100), 4G (800(B20), 1800(B3), 2100(B1), 2300(B40), 2600(B7)). Category not lower than Cat4. or other standard grade/generation higher.	
12.	**Minimum requirements for functionality**		
12.1	Logging all actions in memory	All actions	
12.2	**Compatibility with software of NEGK OJSC and DCPCS of KESC**	In case of award and conclusion of the contract, the Supplier shall provide API and technical description of data transfer protocol for integration at the intersystem level with NEGK OJSC and DCPCS (Data Collection and Processing Centralized System) of the Kyrgyz Energy Settlement Center (KESC).	

3.1 Server equipment for ACEMS.

Item No.	Table of technical requirements	Client's requirement	Qty.	M – Mandatory P - Preferrable	Offered by Bidder
1.	**Server**		At least 6		
1.2	**Processor**				
1.2.1	Type	Processor generation shall be at least Intel® Xeon®E5 Silver, with at least 25 physical cores per processor at a minimum of 2.4 GHz	2	M	
1.3	**Memory**				
1.3.1	RAM	Modules of a class of at least DDR5 2600MHz (PC-20800) RDIMM/LRDIMM, a total of at least 256 GB per server		M	
1.4	**Disc sub-system**				
1.4.1	RAID support	RAID Controller SAS/SATA Controller SAS 12Gbps HW RAID (0,1,10, 5,50, 6, 60) with 4GB cache	1	M	
1.4.2.	Number of hard disk drive bays	16 for 2.5" SSD hard drives with disk sleds.		M	
1.4.3	Hard disks	512GB 2.5" HDDs Transfer rate - 12Gbps Technology - SSD Serial Attached SCSI (SAS) 2.5" Hot Swap 1600 TBW Memory type - SLC\MLC	2	M	

1.4.4	Hard disks	1.2TB 2.5" HDDs Transfer rate 12Gbps Technology - SSD Serial Attached SCSI (SAS) 2.5" Hot Swap 7 PBW Memory type - SLC\MLC	6	M	
4.7.	Hard disks	1.6TB 2.5" HDD Transfer rate 2,100 \ 3,350 MiB/s Interface - PCIe 3.0 x4 Technology - NVMe SSD NVMe SSD U.2 2.5" hot-swappable At least 10 PBW, DWPD - 2 Memory type - SLC\MLC	8	M	
1.5	**Connection**				
1.5.1.	Network interface	Integrated four-port Gigabit Ethernet (1GE) + two-port 10 Gigabit Ethernet (10GE) with interconnection, cabling, and transceiver.		M	
1.6.	**Power supply**				
1.6.1	Power supply, capacity	At least 750 W	2	M	
1.7	**Hot-swappable components**	Power supply, fans.		M	
2.	**Additional equipment**				
2.1	Enclosed cabinet	Closed rack cabinet, 42U with fans and door locks	1	M	

2.2	Switch	KVM switch with retractable chassis mechanism, height not exceeding 1U, with integrated touchpad in single-body version for 8 devices	1	M	
2.3	Chassis	Retractable chassis mechanism for servers with accessories (cable channels, clips, additional required accessories) – Cable arm management, etc.)		M	
2.4	Uninterruptable power supply	UPS for mounting in rack of 5 kVA capacity, (2GB form factor) with built-in batteries with a minimum of 15 minutes autonomous operation time	2	M	
3.	**Network equipment**				
	Router with hardware and software firewall	A router with at least 8 ports of 1 Gigabit Ethernet (1GE), 4 ports of 10 Gigabit Ethernet (10GE) industrial-grade equipment and two independent power supplies.	At least 2	M	
	Switch	A switch with at least 24 ports of 1 Gigabit Ethernet (1GE),4 ports of 10 Gigabit Ethernet (10GE) with industrial-grade redundancy. 4 SFP+ ports (with 10G MM(SM) SR LC transceivers)-4 pcs and two independent power supplies.	At least 4	M	
	Switch	A switch with at least 16 ports of 10 Gigabit Ethernet (10GE) with industrial-grade redundancy. 12 SFP+ ports (with 10G MM(SM) SR LC transceivers)-12 pcs and two independent power supplies.	At least 2	M	
	Load balancer	Industrial grade equipment with Gigabit Ethernet (1GE) connectivity with at least 8 ports. with clustering and SSI offload with a productivity no less than 5 gbps	At least 2	M	

4.	**Topology of servers and number**	Topology of servers and their number, as well as detailed technical specification of equipment shall be provided in the bid (attached as a document on the portal or in the bid) at the time of opening of bids, based on the architecture of the system and the number of meters, concentrators to be serviced. It is also necessary for servers to have a reserve for future increases in data transfer volumes for the next 15-20 years.		M	

3.2 Operation and maintenance software for electricity meters

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
1.	**Software**		
1.1.	Operation and maintenance software for electricity meters	A complete software package (installation distributions, licenses, configuration files, license generator for PC Software, description of the database structure down to the data fields, etc.) based on Microsoft Windows \ Linux with a user interface in English and Russian languages shall be provided to implement the functionality of the AMI system (Data Collection, Processing and Meter Management System) and provide automatic interaction based on modern API interfaces (RESTful API via HTTP/HTTPS protocol + XML file) with the existing Billing System and other systems of the Client.	
1.2.	Interfaces (API)	Availability of interface in accordance with the following standards: IEC 61968-1 (part 1, 3), IEC 61968-9, IEC 61968-11, IEC 61968-100 (Implementation Profiles; Glossary), IEC/TS 61968-2, IEC 61968-900. RESTful API via protocol HTTP/HTTPS + XML file which covers all functionality of the basic software (AMI system).	
1.3.	API modules for cross-system interaction with GIS, SCADA, Billing, mobile applications, etc.	Availability of interface in accordance with the following standards: IEC 61968-1 (part 1, 3), IEC 61968-9, IEC 61968-11, IEC 61968-100 (Implementation Profiles; Glossary), IEC/TS 61968-2, IEC 61968-900. RESTful API via protocol HTTP/HTTPS + XML file which covers all functionality of the basic software (AMI system).	
1.4.	Through channel to/from the meter	Availability of through communication channel to/from the meter for data reading without distortion in real time mode.	
1.5.	Basic software	AMI system (data collection, processing and meter control system)	
1.6.	Configuration module	The AMI system shall have a meter configuration module completely similar to the PC Software configuration module.	
1.7.	Auxiliary software	Local data collection, configuration, maintenance service and etc. A complete PC Software package shall be provided - meter configurator, data concentrator and modem. PC Software shall support connection to metering devices directly or through AMI system. The AMI system shall have the functionality of setting up roles and groups of users and users of PC Software, access to metering devices by various PC software parameters. The AMI system shall have functionality to save and view all commands executed with the PC Software meters in the "through the AMI system" mode of	

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
		operation.	
1.8.	Report generator	Availability of report generator (Crystal Reports, MS SQL Reporting Services, Oracle BI or any other). Ability to generate new reports and modify existing ones without changing the program source code.	
1.9.	Reports	• Selectable readings statistics for a given period (Import, Export, Full): 1. Not taken readings for a given period; 2. Statistics of readings at the time of disconnection; • Statistics on disconnections and connections for a given period: 3. By meters, by quantity, by districts; • Relay status report: currently disconnected or connected; • Report by telecom operators, in the specified section (with reference to territorial affiliation, etc.); • Report on SIM card replacements; • Report on all alarms and events, specified in these specifications; • Report on voltage and current by phase for a given period; • Report on voltage and current max. and min. values; • Report on meter replacement; • Temperature sensor report, how many and which meters were shut down by temperature; • Report on exceeding limits, by number of times the relay is tripped, by district; • And other necessary reports.	
1.10.	Analytics. Modules of balance generation from power supply to customer, forecast and flows.	**Balance**. Checking the convergence of power balances (30 minutes, hour, day, decades, month, given period) and identifying probable sources of unbalance: from the outgoing line (feeder) from the 500/220/110kV substation to the 6-10/0.4kV transformer substations and from the 6-10/0.4kV transformer substation to 0.23-0.4kV customers. There shall be flexible functionality and tools for creating balance groups by different methods: by grid classifier, by electrical equipment hierarchy, by different logical groups, manually, etc. The balance shall be generated taking into account the history of meters, ratios and without them, etc. There shall be flexible functionality and tools for generating formulas for balance groups; **Data collection completeness.** A tool for analyzing the completeness of data collection for certain configured parameters of the metering device, metering devices, groups of metering devices, balance groups, transformer substation, feeder, substation, etc;	

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
		Load and flow schedule based on forecast. A tool that allows to obtain a schedule of energy consumption and energy flows for a day, decade, month, specified period based on data for the previous period (day, decade, month, specified period).	
1.11.	System start-up and commissioning, chief engineer services, commissioning of the system	The supplier shall carry out commissioning works, connect all metering devices and register them in the system. Further, the supplier shall put the system into commercial operation with the corresponding execution of the system commissioning act.	
2.	**Manuals and information**		
2.1.	Information	Detailed functional description of above specified interfaces (API). Description of data transmission, control protocols.	
2.2.	Language of User manuals for electricity meters and software	Russian and English.	
2.3.	Training	Training on the used software products as a developer in a certified center with relevant specialists of the Supplier (programmers, engineers, metrologists, etc.) and equipment (meters, concentrators, benches, etc.) on the territory of the Kyrgyz Republic, as well as provision of documentation in electronic medium and hard copy in Russian and English languages.	
3.	**Technical support for the system anf all equipment**	**Technical support, provision and maintenance of technical documentation, software consultations during the entire life cycle.**	
4.	**Configuration History Module**	**The AMI system shall have a history module of all meter configurations and commands sent and received. The interface shall be friendly and intuitive.**	
5.	**Configuration Monitor**	**The AMI system shall have flexible functionality to create groups of meters according to different parameters (conditions) to configure and send commands to the meters: Limiters, etc. The interface shall be friendly and intuitive.**	
6.	**Certification**	**In case of award and conclusion of the contract: AMI system shall be certified (shall obtain type of AMI systems or have certificate) in the Kyrgyz Republic.** **In case of award and conclusion of the contract: All elements of the AMI system shall be validated for compliance with international or local standards of the**	

Item No.	Table of technical requirements	Client's requirement	Offered by Bidder
		Kyrgyz Republic.	
7.	**Interaction, synchronization and integration with existing Field Deployment Management module**	**AMI system shall interface, synchronize and integrate with the existing Field Deployment Management module.**	
8.	**Interaction, synchronization and integration with existing Work Force Management, Warehouse and Inventory Management modules**	**AMI system shall interface, synchronize and integrate with the existing Work Force Management, Warehouse and Inventory Management modules.**	
9.	**Key Management System module**	**AMI system shall have Key Management System module). Key management system module shall provide flexible functionality and tools for single and bulk installation and modification of security and access keys of smart meters with different verification mechanisms and algorithms.** **The module shall manage security and access keys of all smart metering devices, enter their accounting, timely detection of errors and unauthorized access attempts, ensuring security of messages, etc.**	
10.	**Source codes**		
10.1	Program source codes	Providing full source codes of programs without any condition (Escrow account and others)	
10.2	Program source codes	Providing full source codes of application programs (Application layer, customization source code) without any condition.	

***NOTE: Column 5 "Offered by Bidder" - shall include an unambiguous answer of compliance or non-compliance with the requirements, without references or comments**

4. Drawings

This bidding document includes *[insert "the following" or "no"]* drawings.

[If documents shall be included, insert the following List of Drawings]

List of Drawings		
Drawing Nr.	**Drawing Name**	**Purpose**

5. Inspections and Tests

The following inspections and tests shall be performed by the Supplier or certified third-party laboratories and witnessed by the Purchaser's representative (if applicable):

1. **Type Tests** (for each offered meter model), including but not limited to:
    - Accuracy tests for active and reactive energy (in compliance with IEC 62052-11, IEC 62053-21/23/24);
    - Starting current and no-load test;
    - Influence quantities tests (temperature, voltage, frequency, magnetic field, etc.);
    - Immunity to electromagnetic interference (EMI/EMC tests) according to IEC 61000 standards;
    - Environmental tests including cold, dry heat, damp heat cycle;
    - Climatic and mechanical tests (shock, vibration, drop tests if applicable);
    - Insulation and high voltage tests;
    - Surge protection test (lightning and transient overvoltage).
2. **Routine (Factory Acceptance) Tests** for 100% of the delivered meters:
    - Accuracy testing at reference conditions;
    - Functional tests of all meter features and communication interfaces;
    - Visual inspection for labeling, casing, sealing, and marking;
    - Verification of firmware version and parameter configuration;
    - Real-time clock verification.
3. **Special Tests** (if applicable):
    - Verification of load profile and event logging functions;
    - Endurance testing (life cycle simulation);
    - Tamper detection capability testing;
    - Interoperability and protocol conformance with DLMS/COSEM;
    - Tests for integration with Head-End System (HES) and Data Concentrators.
4. **Certification and Compliance Documentation**:
    - Submission of valid Type Test Reports (not older than 3 years) from internationally accredited laboratories;
    - Calibration certificates;
    - ISO 9001 and ISO 27001 compliance certificates for the manufacturer.

PART 3 – Contract

Section VIII - General Conditions of Contract

Table of Clauses

Section VIII. General Conditions of Contract

1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

(a) "Bank" means the World Bank and refers to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).

(b) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.

(c) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.

(d) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.

(e) "Day" means calendar day.

(f) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.

(g) "GCC" means the General Conditions of Contract.

(h) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.

(i) "Purchaser's Country" is the country specified **in the Special Conditions of Contract** (SCC).

(j) "Purchaser" means the entity purchasing the Goods and Related Services, as **specified in the SCC.**

(k) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.

(l) "SCC" means the Special Conditions of Contract.

(m) "Subcontractor" means any person, private or government entity, or a combination of the above, to whom any part of

the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.

(n) "Supplier" means the person, private or government entity, or a combination of the above, whose Bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

(o) "The Project Site," where applicable, means the place **named in the SCC.**

2. Contract Documents

2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Fraud and Corruption

3.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG's Sanctions Framework, as set forth in Appendix 1 to the GCC.

3.2 The Purchaser requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the Bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

(a) Unless inconsistent with any provision of the Contract**,** the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms **specified in the SCC**.

(b) The terms EXW, CIP, FCA, CFR and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms **specified in the SCC** and published by the International Chamber of Commerce in Paris, France.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

(a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.

(b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the **SCC.** Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified**,** in which case, for purposes of interpretation of the Contract, this translation shall govern.

5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

6. Joint Venture, Consortium or Association

6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.

7. Eligibility

7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.

7.2 All Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

8. Notices

8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address **specified in the SCC.** The term "in writing" means communicated in written form with proof of receipt.

8.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

9. Governing Law

9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser's Country, unless otherwise **specified in the SCC.**

9.2 Throughout the execution of the Contract, the Supplier shall comply with the import of goods and services prohibitions in the Purchaser's Country when:

(a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country; 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, the Borrower's Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.

10. Settlement of Disputes

10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

10.2 If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter

provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC.**

10.3 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

(b) the Purchaser shall pay the Supplier any monies due the Supplier.

11. Inspections and Audit by the Bank

11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors and subconsultants to keep, accurate and systematic accounts and records in respect of the Goods in such form and details as will clearly identify relevant time changes and costs.

11.2 Pursuant to paragraph 2.2 e. of Appendix 1 to the General Conditions the Supplier shall permit and shall cause its agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit, the Bank and/or persons appointed by the Bank to inspect the site and/or the accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have such accounts, records and other documents audited by auditors appointed by the Bank. The Supplier's and its Subcontractors' and subconsultants' attention is drawn to Sub-Clause 3.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

12. Scope of Supply

12.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

13. Delivery and Documents

13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of

Requirements. The details of shipping and other documents to be furnished by the Supplier are **specified in the SCC.**

14. Supplier's Responsibilities

14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.

14.2 The Supplier, including its Subcontractors, shall not employ or engage forced labor or persons subject to trafficking, as described in GCC Sub-Clauses 14.3 and 14.4.

14.3 Forced labor consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements.

14.4 Trafficking in persons is defined as the recruitment, transportation, transfer, harbouring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation.

14.5 The Supplier, including its Subcontractors, shall not employ or engage a child under the age of 14 unless the national law specifies a higher age (the minimum age).

14.6 The Supplier, including its Subcontractors, shall not employ or engage a child between the minimum age and the age of 18 in a manner that is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

14.7 Work considered hazardous for children is work that, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety, or morals of children. Such work activities prohibited for children include work:

(a) with exposure to physical, psychological or sexual abuse;

(b) underground, underwater, working at heights or in confined spaces;

(c) with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads;

(d) in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health; or

(e) under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer.

14.8 The Supplier shall comply, and shall require its Subcontractors if any to comply, with all applicable health and safety regulations, laws, guidelines, and any other requirement stated in the Technical Specifications.

14.9 **Pursuant to the SCC**, the Supplier, including its Subcontractors/ suppliers/ manufacturers shall take all technical and organizational measures necessary to protect the information technology systems and data used in connection with the Contract. Without limiting the foregoing, the Supplier, including its Subcontractors/ suppliers/ manufacturers, shall use all reasonable efforts to establish, maintain, implement and comply with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any information technology system or data used in connection with the Contract.

14.10 The Supplier shall comply with additional obligations as **specified in the SCC.**

15. Contract Price

15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its Bid, with the exception of any price adjustments **authorized in the SCC.**

16. Terms of Payment

16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as **specified in the SCC.**

16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.

16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.

16.4 The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the Bid price is expressed.

16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period **set forth in the SCC,** the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate **shown in the SCC,** for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.

17. Taxes and Duties

17.1 For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.

17.2 For goods Manufactured within the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

18. Performance Security

18.1 If required as specified in the SCC, the Supplier shall, within twenty-eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount **specified in the SCC.**

18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

18.3 As specified in the SCC, the Performance Security, if required, shall be denominated in the currency (ies) of the Contract, or in a freely convertible currency acceptable to the Purchaser; and shall be in one of the format stipulated by the **Purchaser in the SCC,** or in another format acceptable to the Purchaser.

18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless **specified otherwise in the SCC.**

19. Copyright

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if

they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

20. Confidential Information

20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

(a) the Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;

(b) now or hereafter enters the public domain through no fault of that party;

(c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or

(d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Notification by the Supplier, for addition of any Subcontractor not named in the Contract, shall also include the Subcontractor's declaration in accordance with Appendix 2 to the GCC- Sexual exploitation and Abuse (SEA) and/or Sexual Harassment (SH) Performance Declaration. Such notification, in the original Bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards

22.1 Technical Specifications and Drawings

(a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VI, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.

(b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.

(c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and Documents

23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where

appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, **specified in the SCC,** and in any other instructions ordered by the Purchaser.

24. Insurance

24.1 Unless otherwise **specified in the SCC,** the Goods supplied under the Contract shall be fully insured—in a freely convertible currency from an eligible country—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the **SCC.**

25. Transportation and Incidental Services

25.1 Unless otherwise **specified in the SCC,** responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.

25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, **specified in SCC:**

(a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;

(b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;

(c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;

(d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

(e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.

25.3 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services

26. Inspections and Tests

26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are **specified in the SCC.**

26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as **specified in the SCC.** Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.

26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.

26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.

26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall

repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.

26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage **specified in the SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage **specified in those SCC.** Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

28.3 Unless otherwise **specified in the SCC,** the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination **indicated in the SCC,** or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.

28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.

28.5 Upon receipt of such notice, the Supplier shall, within the period **specified in the SCC,** expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.

28.6 If having been notified, the Supplier fails to remedy the defect within the period **specified in the SCC,** the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent Indemnity

29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

(a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and

(b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

30.1 Except in cases of criminal negligence or willful misconduct,

(a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and

(b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the Purchaser with respect to patent infringement

31. Change in Laws and Regulations

31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's Country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already

been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. Force Majeure

32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

33. Change Orders and Contract Amendments

33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

(a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;

(b) the method of shipment or packing;

(c) the place of delivery; and

(d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not

exceed the prevailing rates charged to other parties by the Supplier for similar services.

33.4 **Value Engineering:** The Supplier may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

(a) the proposed change(s), and a description of the difference to the existing contract requirements;

(b) a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Purchaser may incur in implementing the value engineering proposal; and

(c) a description of any effect(s) of the change on performance/functionality.

The Purchaser may accept the value engineering proposal if the proposal demonstrates benefits that:

(a) accelerates the delivery period; or

(b) reduces the Contract Price or the life cycle costs to the Purchaser; or

(c) improves the quality, efficiency or sustainability of the Goods; or

(d) yields any other benefits to the Purchaser,

without compromising the necessary functions of the Facilities.

If the value engineering proposal is approved by the Purchaser and results in:

(a) a reduction of the Contract Price; the amount to be paid to the Supplier shall be the percentage specified **in the PCC** of the reduction in the Contract Price; or

(b) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Supplier shall be the full increase in the Contract Price.

33.5 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

34. Extensions of Time

34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify

the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. Termination

35.1 Termination for Default

(a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:

(i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;

(ii) if the Supplier fails to perform any other obligation under the Contract; or

(iii) if the Supplier, in the judgment of the Purchaser has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of the Appendix 1 to the GCC, in competing for or in executing the Contract.

(b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

(a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect

any right of action or remedy that has accrued or will accrue thereafter to the Purchaser

35.3 Termination for Convenience.

(a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

(b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

(i) to have any portion completed and delivered at the Contract terms and prices; and/or

(ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

36. Assignment

36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

37. Export Restriction

37.1 Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser and of the Bank that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Purchaser's convenience pursuant to Sub-Clause 35.3.

APPENDIX 1

(Text in this Appendix shall not be modified)

Fraud and Corruption

1. Purpose

1.1 The Bank's Anti-Corruption Guidelines and this annex apply with respect to procurement under Bank Investment Project Financing operations.

2. Requirements

2.1 The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors and suppliers; any sub-contractors, sub-consultants, service providers or suppliers; any agents (whether declared or not); and any of their personnel, observe the highest standard of ethics during the procurement process, selection and contract execution of Bank-financed contracts, and refrain from Fraud and Corruption.

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

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 misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain 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:

(a) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank 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

(b) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 2.2 e. below.

b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;

c. In addition to the legal remedies set out in the relevant Legal Agreement, may take other appropriate actions, including declaring misprocurement, if the Bank determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement process, selection and/or execution of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;

d. Pursuant to the Bank's Anti-Corruption Guidelines, and in accordance with the Bank's prevailing sanctions policies and procedures, may sanction a firm or individual, either indefinitely or for a stated period of time, including by publicly declaring such firm or individual ineligible (i) to be awarded or otherwise benefit from a Bank-financed contract, financially or in any other manner;1 (ii) to be a nominated2 sub-contractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract; and (iii) to receive the proceeds of any loan made by the Bank or otherwise to participate further in the preparation or implementation of any Bank-financed project;

e. Requires that a clause be included in bidding/request for proposals documents and in contracts financed by a Bank loan, requiring (i) bidders (applicants/proposers), consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect[3] all accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have them audited by auditors appointed by the Bank.

[1] For the avoidance of doubt, a sanctioned party's ineligibility to be awarded a contract shall include, without limitation, (i) applying for pre-qualification, expressing interest in a consultancy, and bidding, either directly or as a nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider, in respect of such contract, and (ii) entering into an addendum or amendment introducing a material modification to any existing contract.

[2] A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

[3] Inspections in this context usually are investigative (i.e., forensic) in nature. They involve fact-finding activities undertaken by the Bank or persons appointed by the Bank to address specific matters related to investigations/audits, such as evaluating the veracity of an allegation of possible Fraud and Corruption, through the appropriate mechanisms. Such activity includes but is not limited to: accessing and examining a firm's or individual's financial records and information, and making copies thereof as relevant; accessing and examining any other documents, data and information (whether in hard copy or electronic format) deemed relevant for the investigation/audit, and making copies thereof as relevant; interviewing staff and other relevant individuals; performing physical inspections and site visits; and obtaining third party verification of information.

APPENDIX 2

Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment (SH) Performance Declaration for Subcontractors*

[The following table shall be filled in by each subcontractor proposed by the Supplier, that was not named in the Contract]

Subcontractor's Name: *[insert full name]*

Date: *[insert day, month, year]*
Contract reference *[insert contract reference]*
Page *[insert page number]* of *[insert total number]* pages

SEA and/or SH Declaration
We: ☐ (a) have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations. ☐ (b) are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations. ☐ (c) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations, and were removed from the disqualification list. An arbitral award on the disqualification case has been made in our favor.
[*If (c) above is applicable, attach evidence of an arbitral award reversing the findings on the issues underlying the disqualification.]*
Period of disqualification: From: _____ To: _____

Name of the Subcontractor_____

Name of the person duly authorized to sign on behalf of the Subcontractor_____

Title of the person signing on behalf of the Subcontractor_____

Signature of the person named above_____

Date signed _____ day of _____, _____

Countersignature of authorized representative of the Supplier:
Signature: _____

Date signed _____ day of _____, _____

Section IX - Special Conditions of Contract

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

GCC 1.1(i)	The Purchaser's Country is: Kyrgyz Republic
GCC 1.1(j)	The Purchaser is: Ministry of Energy of Kyrgyz Republic
GCC 1.1 (o)	The Project Site(s)/Final Destination(s) is/are: 50% of the equipment: **Destination 1.1** – (Central Warehouse) Chuy oblast *Dachnoe v., GES-5, Alamudun region., Kyrgyz Republic* 50% of the equipment: **Destination 1.2** – (Osh PES) Osh oblast *b/n Rembaza, Djambulskaya str., Turan microregion, Osh city, Kyrgyz Republic*
GCC 1.1 (p)	The term **SEA/SH** where used in the Contract has the following meaning: • "**Sexual Exploitation and Abuse" "(SEA)"** means the following: **Sexual Exploitation** is defined as any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another. **Sexual Abuse** is defined as the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. • **"Sexual Harassment" "(SH)"** is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature by supplier's personnel with other supplier's, or purchaser's personnel.
GCC 4.2 (a)	The meaning of the trade terms shall be as prescribed by Incoterms.
GCC 4.2 (b)	The version edition of Incoterms shall be *2020*
GCC 5.1	The language shall be: *English*

GCC 8.1	The Project Site(s)/Final Destination(s) is/are: Ministry of Energy of Kyrgyz Republic Attention: *Mr. Guljigit Murzakarimov* Address: *326 Jibek-Joly av.* Floor/Room number*: 1st floor, 122* City: *Bishkek* ZIP Code: *720040* Country: Kyrgyz Republic Electronic mail address: murzakarimovg@gmail.com and kems.procur@gmail.com
GCC 9.1	The Purchaser's Country is: Kyrgyz Republic
GCC 10.2	The rules of procedure for arbitration proceedings pursuant to GCC Clause 10.2 shall be as follows: *"Clause 10.2 (a) shall be retained in the case of a Contract with a foreign Supplier and clause 10.2 (b) shall be retained in the case of a Contract with a national of the Purchaser's Country."]* ***(a) Contract with foreign Supplier:*** GCC 10.2 (a)—Any dispute, controversy or claim arising out of or relating to this Contract, or breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force. ***(b) Contracts with Supplier national of the Purchaser's Country:*** In the case of a dispute between the Purchaser and a Supplier who is a national of the Purchaser's Country, the dispute shall be referred to adjudication or arbitration in accordance with the laws of the Purchaser's Country.
GCC 13.1	Details of Shipping and other Documents to be furnished by the Supplier are ***For goods to be delivered from abroad:*** Upon shipment, the Supplier notifies the Buyer and the Insurance Company of the full details of the shipment, including the Contract number, Product description, quantity, vessel, bill of lading number, as well as the date, port of loading, date of dispatch. shipment, port of discharge, etc. The Supplier must send the following documents to the Buyer and copies to the Insurance Company:

	(i) The original and three copies of the Supplier's invoice indicating the Contract number, product description, quantity, unit price, total amount; (ii) The original and three copies of the complete set of transport documents for goods delivered by truck and/or conventional transport and/or rail and/or sea transport, in the case of carriage by sea, this requirement should be understood as a complete set of negotiable, clean, on-board bills of lading marked "prepayment for transportation" and 3 copies of non-negotiable bill of lading; (iii) Four copies of the inventory of the delivery set, indicating the contents of each package; (iv) The original and three copies of the insurance certificate must indicate the Buyer as the insured party; (v) Original and three copies of the manufacturer's/supplier's warranty certificate; (vi) a certified copy and three copies of the Supplier's factory inspection report; (vii) a certified copy and three copies of the certificate of origin. The above documents must be received by the Buyer no later than two weeks before the arrival of the Goods at the port or place of arrival, and if it is not received, the Supplier will be responsible for any subsequent costs. **For goods to be delivered in the buyer's country:** Upon delivery of the Goods to the carrier, the Supplier notifies the Buyer and sends the following documents to the Buyer: (i) The original and three copies of the Supplier's invoice indicating the Contract number, description of the Goods, quantity, unit price, total amount; (ii) The original and three copies of the complete set of transport documents for the goods indicating delivery to the project site; (iii) four copies of the inventory of the delivery set, indicating the contents of each package; (iv) The original and three copies of the manufacturer's/supplier's warranty certificate; (v) The original and three copies of the insurance certificate, the certificate must indicate the Buyer as the insured party; (vi) a certified copy and three copies of the Supplier's factory inspection report; (vii) a certified copy and three copies of the certificate of origin.

	The above documents shall be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.
GCC 14.9	Pursuant to the SCC, the Supplier, including its Subcontractors, suppliers, and manufacturers, shall take all necessary **technical and organizational measures** to protect the information technology systems and data used in connection with the performance of this Contract. Without limiting the generality of the foregoing, the Supplier (including its Subcontractors, suppliers, and manufacturers) shall: • Establish, implement, and maintain effective **information technology, information security, and cybersecurity controls** that meet internationally recognized standards (e.g., ISO/IEC 27001 or equivalent). • Apply **data protection policies and procedures**, including access controls, encryption, secure communication protocols, and regular vulnerability assessments. • Ensure **business continuity and disaster recovery plans** are in place to prevent, detect, and respond to any incidents involving the unauthorized access, distribution, use, modification, disablement, or loss of data or information systems related to the Contract. • Implement **physical and technological safeguards**, such as firewalls, intrusion detection systems, and firmware integrity protection for supplied equipment. The Supplier shall promptly notify the Purchaser of any cybersecurity incidents, data breaches, or risks that could affect the confidentiality, integrity, or availability of the information systems or data associated with this Contract.

GCC 14.10	GCC 14.10.1 The Supplier shall have a code of conduct, and provide appropriate sensitization, for the Supplier's personnel carrying out *installation* that include, but not limited to, maintaining a safe working environment and not engaging in the following practices: (i) any form of sexual harassment including unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Supplier's or Purchaser's personnel; (ii) any form of sexual exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another; (iii) any form of sexual abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions; and (iv) any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage. GCC 14.10.2 The Purchaser may require the Supplier to remove (or cause to be removed), from the site or other places where the *installation* is being executed, a Supplier's personnel that undertakes behaviors that are inconsistent with the code of conduct stated in GCC 14.9.1. Notwithstanding any requirement from the Purchaser to replace any such person, the Supplier shall immediately remove (or cause to be removed) any such person, from the site or other places where the *installation* is being executed. In either case, the Supplier shall promptly appoint, as appropriate, a suitable replacement with equivalent skills and experience.
GCC 15.1	The prices charged for the Goods supplied and the related Services performed *shall not* be adjustable.
GCC 16.1	***Sample provision*** GCC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows: **Payment for Goods supplied from abroad:** Payment of foreign currency portion shall be made in (_____) *[currency of the Contract Price]* in the following manner:

	(i) **Advance Payment:** Ten (10) percent of the Contract Price shall be paid within thirty (30) days of signing of the Contract, and upon submission of claim and a bank guarantee for equivalent amount valid until the Goods are delivered and in the form provided in the bidding document or another form acceptable to the Purchaser. (ii) **On Shipment:** Eighty (80) percent of the Contract Price of the Goods shipped shall be paid through irrevocable confirmed letter of credit opened in favor of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 13. (iii) **On Acceptance:** Ten (10) percent of the Contract Price of Goods received **and accepted as a complete and functional system** shall be paid within thirty (30) days of receipt of the Goods, upon submission of a payment claim supported by an **acceptance certificate issued by the Purchaser confirming system-level acceptance**. Payment of local currency portion shall be made in _____ *[currency]* within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed. **Payment for Goods and Services supplied from within the Purchaser's Country:** Payment for Goods and Services supplied from within the Purchaser's Country shall be made in _____ *[currency]*, as follows: (i) **Advance Payment:** Ten (10) percent of the Contract Price shall be paid within thirty (30) days of signing of the Contract against a simple receipt and a bank guarantee for the equivalent amount and in the form provided in the bidding document or another form acceptable to the Purchaser. (ii) **On Delivery:** Eighty (80) percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents specified in GCC Clause 13. (iii) **On Acceptance:** Ten (10) percent of the Contract Price of Goods received **and accepted as a complete and functional system** shall be paid within thirty (30) days of receipt of the Goods, upon submission of a payment claim supported by an **acceptance certificate issued by the Purchaser confirming system-level acceptance**.

GCC 16.5	The payment-delay period after which the Purchaser shall pay interest to the supplier shall be *30* days. The interest rate that shall be applied is *0.01 % per day*
GCC 18.1	A Performance Security *shall be required* *The amount of the Performance Security shall be:10%* *The Performance security shall be valid for the period covering delivery time of goods, provision of related services and warranty period starting from 100% goods acceptance. Upon delivery and installation of the Goods (as confirmed by relevant acceptance certificates issued by the Purchaser), the amount of performance security shall be reduced to 2% of the Contract Price for the duration of warranty periods envisioned by the Contract.*
GCC 18.3	If required, the Performance Security shall be in the form of : ***An unconditional Bank Guarantee, in accordance with the standard form provided by the tender documentation.*** If required, the Performance security shall be denominated in *the currencies of payment of the Contract, in accordance with their portions of the Contract Price*
GCC 18.4	Discharge of the Performance Security shall take place: *Not later than twenty-eight (28) days after completion of the warranty period*
GCC 23.2	The packing, marking and documentation within and outside the packages shall be: a) The name of the Supplier and its trademark, if any. b) Country of origin. c) The name of the product. d) Gross and net weight in kilograms. e) Name of the Purchaser (f) The name of the consignee and the final destination.
GCC 24.1	The insurance coverage shall be as specified in the Incoterms.
GCC 25.1	Responsibility for transportation of the Goods shall be as specified in the Incoterms.
GCC 25.2	Incidental services to be provided are: *In accordance with the Related Services table*

GCC 26.1	The inspections and tests shall be: *Upon delivery: Goods shipped from abroad may be subject to inspection at a customs warehouse in Bishkek.* *After delivery to the final destination (Project site), the goods are thoroughly checked and checked for compliance with the technical conditions provided for in the contract. This will include checking the functionality and proper operation of the product in accordance with the manufacturer's instructions.* *On the part of the Purchaser, the acceptance will be carried out by a commission consisting of representatives of the Ministry of Energy of the Kyrgyz Republic.*
GCC 26.2	The Inspections and tests shall be conducted at: *Final Destination*
GCC 27.1	The liquidated damage shall be: 0.5% per week
GCC 27.1	The maximum amount of liquidated damages shall be: *10*% of the amount of not supplied goods or unperformed services.
GCC 28.3	The period of validity of the Warranty shall be: *60 month* For purposes of the Warranty, the place(s) of final destination(s) shall be: *[insert name(s) of location(s)]* ***Sample provision*** GCC 28.3—In partial modification of the provisions, the warranty period shall be **10,000 (ten thousand) hours of operation or 60 (sixty) months** from date of acceptance of the Goods or **66 (sixty-six) months** from the date of shipment, whichever occurs earlier. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract. If, for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall, at its discretion, either: (a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with GCC 26.7, **or** (b) pay liquidated damages to the Purchaser with respect to the failure to meet the contractual guarantees. The rate of these liquidated damages shall be 0.5% of the Contract Price of the affected Goods per week, up to a maximum of 10% of the total Contract Price.
GCC 28.5 & 28.6	The period for repair or replacement shall be: *30* days.
GCC 33.4	NA

Attachment: Price Adjustment Formula – Not applicable

Section X - Contract Forms

Table of Forms

Notification of Intention to Award

[*This Notification of Intention to Award shall be sent to each Bidder that submitted a Bid, unless the Bidder has previously received notice of exclusion from the process at an interim stage of the procurement process.*]

[*Send this Notification to the Bidder's Authorized Representative named in the Bidder Information Form*]

For the attention of Bidder's Authorized Representative

Name: *[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*

Email Address: *[insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to Bidders. The Notification must be sent to all Bidders simultaneously. This means on the same date and as close to the same time as possible.]

DATE OF TRANSMISSION: This Notification is sent by: [*email/fax*] on [*date*] (local time)

Notification of Intention to Award

Purchaser: *[insert the name of the Purchaser]*
Project: *[insert name of project]*
Contract title: *[insert the name of the contract]*
Country: *[insert country where RFB is issued]*
Loan No. /Credit No. / Grant No.: *[insert reference number for loan/credit/grant]*
RFB No: *[insert RFB reference number from Procurement Plan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period you may:

a) request a debriefing in relation to the evaluation of your Bid, and/or

b) submit a Procurement-related Complaint in relation to the decision to award the contract.

1. The successful Bidder

Name:	[*insert name of successful Bidder*]
Address:	[*insert address of the successful Bidder*]
Contract price:	[*insert contract price of the successful Bid*]

Total combined score:	*[insert the total combined score of the successful Bidder]*

2. Other Bidders *[INSTRUCTIONS: insert names of all Bidders that submitted a Bid, Bid prices as read out and evaluated, technical scores and combined scores.]*

Name of Bidder	Technical Score	Bid Price	Evaluated Bid Cost	Combined Score
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	*[insert evaluated cost]*	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	*[insert evaluated cost]*	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	*[insert evaluated cost]*	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	*[insert evaluated cost]*	*[insert combined score]*
[*insert name*]	*[insert Technical score]*	[*insert Bid price*]	*[insert evaluated cost]*	*[insert combined score]*

3. Reason/s why your Bid was unsuccessful *[Delete if the combined score already reveals the reason]*

[INSTRUCTIONS: State the reason/s why <u>this</u> Bidder's Bid was unsuccessful. Do NOT include: (a) a point by point comparison with another Bidder's Bid or (b) information that is marked confidential by the Bidder in its Bid.]

4. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on [*insert date*] (local time).

You may request a debriefing in relation to the results of the evaluation of your Bid. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Bidder, contact details; and address the request for debriefing as follows:

Attention: [*insert full name of person, if applicable*]

Title/position: [*insert title/position*]

Agency: [*insert name of Purchaser*]

Email address: [*insert email address*]

Fax number: [*insert fax number*] ***delete if not used***

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

5. How to make a complaint

Period: Procurement-related Complaint challenging the decision to award shall be submitted by midnight, [*insert date*] (local time).

Provide the contract name, reference number, name of the Bidder, contact details; and address the Procurement-related Complaint as follows:

Attention: [*insert full name of person, if applicable*]

Title/position: [*insert title/position*]

Agency: [*insert name of Purchaser*]

Email address: [*insert email address*]

Fax number: [*insert fax number*] ***delete if not used***

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

Further information:

For more information see the Procurement Regulations for IPF Borrowers (Procurement Regulations) (Annex III). You should read these provisions before preparing and submitting your complaint. In addition, the World Bank's Guidance "How to make a Procurement-related Complaint" provides a useful explanation of the process, as well as a sample letter of complaint.

In summary, there are four essential requirements:

1. You must be an 'interested party'. In this case, that means a Bidder who submitted a Bid in this bidding process, and is the recipient of a Notification of Intention to Award.
2. The complaint can only challenge the decision to award the contract.
3. You must submit the complaint within the period stated above.
4. You must include, in your complaint, all of the information required by the Procurement Regulations (as described in Annex III).

6. Standstill Period

DEADLINE: The Standstill Period is due to end at midnight on [*insert date*] (local time).

The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Award.

The Standstill Period may be extended as stated in Section 4 above.

If you have any questions regarding this Notification please do not hesitate to contact us.

On behalf of the Purchaser:

Signature: _____

Name: _____

Title/position: _____

Telephone: _____

Email: _____

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful Bidder[1]. In case of joint venture, the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

- *directly or indirectly holding 25% or more of the shares*
- *directly or indirectly holding 25% or more of the voting rights*
- *directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder*

RFB No.: [*insert number of RFB process*]
Request for Bid No.: [*insert identification*]

To: **[*insert complete name of Purchaser*]**

In response to your request in the Letter of Acceptance *dated [insert date of letter of Acceptance]* to furnish additional information on beneficial ownership: *[select one option as applicable and delete the options that are not applicable]*

(i) we hereby provide the following beneficial ownership information.

Details of beneficial ownership

Identity of Beneficial Owner	Directly or indirectly holding 25% or more of the shares (Yes / No)	Directly or indirectly holding 25 % or more of the Voting Rights (Yes / No)	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Bidder (Yes / No)
[include full name (last, middle, first), nationality, country of residence]			

OR

(ii) *We declare that there is no Beneficial Owner meeting one or more of the following conditions:*

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

OR

(iii) We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]

- directly or indirectly holding 25% or more of the shares
- directly or indirectly holding 25% or more of the voting rights
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder]"

Name of the Bidder: *[*insert complete name of the Bidder*]_____

Name of the person duly authorized to sign the Bid on behalf of the Bidder: **[*insert complete name of person duly authorized to sign the Bid*]_____

Title of the person signing the Bid: [*insert complete title of the person signing the Bid*]_____

Signature of the person named above: [*insert signature of person whose name and capacity are shown above*]_____

Date signed [*insert date of signing*] **day of** [*insert month*], [*insert year*]_____

[*] In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to "Bidder" in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.

[**] Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Letter of Acceptance

[letterhead paper of the Purchaser]

[date]

To: *[name and address of the Supplier]*

Subject: ***Notification of award Contract No.*** . . . . . .

This is to notify you that your Bid dated . . . . ***[insert date] . . .*** . . . for execution of the . . . . . **. . . .** ***[insert name of the contract and identification number, as given in the SCC]*** . . . . . for the Accepted Contract Amount of . . . . . ***. [insert amount in numbers and words and name of currency]***, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish (i) the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms and (ii) the additional information on beneficial ownership in accordance with ITB 48.1 within eight (8) Business days using the Beneficial Ownership Disclosure Form, included in Section X, - Contract Forms, of the Bidding Document.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Contract Agreement

Contract Agreement

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS AGREEMENT made the *[insert: **number**]* day of *[insert: **month**]*, *[insert: **year**]*.

BETWEEN

(1) *[insert complete name of Purchaser]*, a *[insert description of type of legal entity, for example, an agency of the Ministry of .... of the Government of { insert name of Country of Purchaser }, or corporation incorporated under the laws of { insert name of Country of Purchaser }]* and having its principal place of business at *[insert address of Purchaser]* (hereinafter called "the Purchaser"), of the one part, and

(2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier"), of the other part:

WHEREAS the Purchaser invited Bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services

The Purchaser and the Supplier 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.

   (a) the Letter of Acceptance

   (b) Letter of Bid - Technical Part

   (c) Letter of Bid - Financial Part

   (d) the Addenda Nos._____ (if any)

   (e) Special Conditions of Contract

   (f) General Conditions of Contract

   (g) the Specification (including Schedule of Requirements and Technical Specifications)

   (h) the completed Schedules (including Price Schedules)

   (i) any other document listed in GCC as forming part of the Contract

3. In consideration of the payments to be made by the Purchaser to the Supplier as specified in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services 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 *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser:

Signed: *[insert signature]*

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier:

Signed: *[insert signature of authorized representative(s) of the Supplier]*

in the capacity of *[insert title or other appropriate designation]*

in the presence of *[insert identification of official witness]*

Performance Security

Option 1: (Bank Guarantee)

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _ *[insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the supply of _ *[insert name of contract and brief description of Goods and related Services]* (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 Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*,[1] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary 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…[2], and any demand for payment under it must be received by us at this office indicated above on or before that date.

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[1] *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, and denominated either in the currency (ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

[2] *Insert the date twenty-eight days after the expected completion date as described in GC Clause 18.4. The Purchaser should note that in the event of an extension of this date for completion of the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this*

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

guarantee, the Purchaser 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 Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Option 2: Performance Bond

By this Bond *[insert name of Principal]* as Principal (hereinafter called "the Supplier") and *[insert name of Surety]* as Surety (hereinafter called "the Surety"), are held and firmly bound unto *[insert name of Purchaser]* as Obligee (hereinafter called "the Supplier") in the amount of *[insert amount in words and figures]*, for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Supplier and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Supplier has entered into a written Agreement with the Purchaser dated the _____ day of _____, 20 __, for *[name of contract and brief description of Goods and related Services]* in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW, THEREFORE, the Condition of this Obligation is such that, if the Supplier shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Supplier shall be, and declared by the Purchaser to be, in default under the Contract, the Purchaser having performed the Purchaser's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

(1) complete the Contract in accordance with its terms and conditions; or

(2) obtain a Bid or Bids from qualified Bidders for submission to the Purchaser for completing the Contract in accordance with its terms and conditions, and upon determination by the Purchaser and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Purchaser and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Purchaser to Supplier under the Contract, less the amount properly paid by Purchaser to the Supplier; or

(3) pay the Purchaser the amount required by Purchaser to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted not later than twenty-eight (28) days following the date of completion of the Supplier's performance of its obligations under the Contract, including any warranty obligations.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Purchaser named herein or the heirs, executors, administrators, successors, and assigns of the Purchaser.

In testimony whereof, the Supplier has hereunto set his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his legal representative, this _____ day of _____ 20 _____.

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

Advance Payment Security

Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *[insert name of contract and brief description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[insert amount in figures]* () *[insert amount in words]* is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (_____) *[insert amount in words]*[1] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

(a) has used the advance payment for purposes other than toward delivery of Goods; or

(b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

[1] *The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Purchaser.*

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number *[insert number]* at *[insert name and address of Applicant's bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified 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 ninety (90) percent of the Accepted Contract Amount, has been certified for payment, or on the *[insert day]* day of *[insert month]*, 2 *[insert year]*, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No.758, except that the supporting statement under Article 15(a) is hereby excluded.

_____

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.