REPUBLIC OF THE PHILIPPINES
NATIONAL POWER CORPORATION
(Pambansang Korporasyon sa Elektrisidad)

BID DOCUMENTS

Name of Project	:	**UPGRADING OF THE REMAINING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT**
Project Location	:	**NPC SAN ROQUE FFWSDO OFFICE & THIRTEEN (13) WARNING STATIONS**
PR No.	:	**HO-FFW24-003**
Contents	:	

Design and Development Department

SECTION I

INVITATION TO BID

National Power Corporation
INVITATION TO BID
PUBLIC BIDDING – BCS 2024-0489

1. The NATIONAL POWER CORPORATION (NPC), through its approved Corporate Budget of CY 2024 intends to apply the sum of **(Please see schedule below)** being the Approved Budget for the Contract (ABC) to payments under the contract. Bids received in excess of the ABC shall be automatically rejected at Bid opening.

PR Nos./PB Ref No. & Description	Similar Contracts	Pre-bid Conference	Bid Submission / Opening	ABC/ Amt. of Bid Docs
HO-FFW24-003 / PB240801-CM00348 Upgrading of the Remaining Thirteen (13) Warning Stations of San Roque Dam Project	Supply, Delivery, Installation & Test or Upgrading of Dam and Water Reservoir Flood Forecasting / Early Warning System	19 July 2024 9:30 A.M.	01 August 2024 9:30 A.M.	₱ 29,241,000.00 / ₱ 25,000.00
HO-CRT24-001 / PB240708-NA00319 (PB2) Three (3) Year Lease of Ten (10) Units Plain Paper Copying Machines for Various NPC Offices within and outside Metro Manila	Lease of Photocopying and/or Office Machines	19 July 2024 9:30 A.M.	01 August 2024 9:30 A.M.	₱ 9,354,519.00 / ₱ 10,000.00
Venue: Kañao Function Room, NPC Bldg. Diliman, Quezon City				

2. The NPC now invites bids for Items listed above. Delivery of the Goods is required **(see table below)** specified in the Technical Specifications. Bidders should have completed, within **(see table below)** from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. (Instruction to Bidders).

PR No/s. / PB Ref No/s.	Delivery Period / Contract Duration	Relevant Period of SLCC reckoned from the date of submission & receipt of bids
HO-FFW24-003	One Hundred Fifty (150) Calendar Days	Ten (10) Years
HO-CRT24-001	Thirty (30) Calendar Days / Three (3) Years	Five (5) Years

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary "*pass/fail*" criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

   Bidding is restricted to Filipino citizens/sole proprietorships, partnerships, or organizations with at least sixty percent (60%) interest or outstanding capital stock belonging to citizens of the Philippines, and to citizens or organizations of a country the laws or regulations of which grant similar rights or privileges to Filipino citizens, pursuant to RA 5183.

4. Prospective Bidders may obtain further information from National Power Corporation, Bids and Contracts Services Division and inspect the Bidding Documents at the address given below during office hours (8:00AM to 5:00PM), Monday to Friday.

5. A complete set of Bidding Documents may be acquired by interested Bidders from the given address and website(s) and upon payment of the applicable fee for the Bidding Documents, pursuant to the latest Guidelines issued by the GPPB. *Bidding fee may be refunded in accordance with the guidelines based on the grounds provided under Section 41 of R.A. 9184 and its Revised IRR.*

6. The National Power Corporation will hold Pre-Bid Conference **(see table above)** and/or through video conferencing or webcasting which shall be open to prospective bidders. Only registered bidder/s shall be allowed to participate in the conduct of virtual pre-bid conference. **Unregistered bidders** may attend the Pre-Bid Conference at the Kañao Room, NPC subject to the following:

   a. Only a maximum of two (2) representatives from each bidder / company shall be allowed to participate during the virtual pre-bid conference.
   b. Wearing of Face Masks is recommended but not required in view of Proclamation No. 297 S.2023 lifting the State of Public Health Emergency Throughout the Philippines
   c. The requirements herein stated including the medium of submission shall be subject to GPPB Resolution No. 09-2020 dated 07 May 2020
   d. The Guidelines on the Implementation of Early Procurement Activities (EPA) shall be subject to GPPB Circular No. 06-2019 dated 17 July 2019

7. Bids must be duly received by the BAC Secretariat through (i) manual submission at the office address indicated below; (ii) online or electronic submission before the specified time stated in the table above for opening of bids. Late bids shall not be accepted.

8. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 14.

9. Bid opening shall be in the Kañao Function Room, NPC Head Office, Diliman, Quezon City and/or via online platform to be announced by NPC. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.

10. The National Power Corporation reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of R.A. No. 9184, without thereby incurring any liability to the affected bidder or bidders.

11. For further information, please refer to:

    Bids and Contracts Services Division,
    Logistics Department
    Gabriel Y. Itchon Building
    Senator Miriam P. Defensor-Santiago Ave. (formerly BIR Road)
    Cor. Quezon Ave., Diliman, Quezon City, 1100
    Tel Nos.: Tel Nos.: 8921-3541 local 5564/5713
    Email: bcsd@napocor.gov.ph /

12. You may visit the following websites:

    For downloading of Bidding Documents: https://www.napocor.gov.ph/bcsd/bids.php

ATTY. MELCHOR P. RIDULME
Sr. Vice President & COO and
Chairman, Bids and Awards Committee

SECTION II

INSTRUCTIONS TO BIDDERS

SECTION II – INSTRUCTIONS TO BIDDERS

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SECTION II – INSTRUCTIONS TO BIDDERS

1. Scope of Bid

The **National Power Corporation (NPC** or **NAPOCOR)** wishes to receive Bids for the **UPGRADING OF THE REMAININING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT,** with identification number **PR NO. HO-FFW24-003.**

The Procurement Project (referred to herein as "Project") is composed of one (1) lot and will be awarded to one (1) Bidder in one complete contract, the details of which are described in Section VI (Technical Specifications).

2. Funding Information

2.1. The GOP through the source of funding as indicated below for CY 2024 in the amount of ₱ _____.

2.2. The source of funding is the Corporate Operating Budget of the National Power Corporation.

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex "I" of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. Foreign ownership exceeding those allowed under the rules may participate when citizens, corporations, or associations of a country, included in the list issued by the GPPB, the laws or regulations of which grant reciprocal rights or privileges to citizens, corporations, or associations of the Philippines.

The foreign bidder claiming eligibility by reason of their country's extension of reciprocal rights to Filipinos shall submit a certification from the relevant government office of their country stating that Filipinos are allowed to participate in their government procurement activities for the same item/product. The said certification shall be validated during the post-qualification of bidders.

5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA's CPI, must be at least equivalent to at least fifty percent (50%) of the ABC.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

7. Subcontracts

7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than twenty percent (20%) of the Project.

The portions of Project and the maximum percentage allowed to be subcontracted are indicated in the **BDS**, which shall not exceed twenty percent (20%) of the contracted Goods.

7.2. The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.

7.3. Subcontracting of any portion of the Project does not relieve the Supplier of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Supplier's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address and/or through videoconferencing/webcasting as indicated in paragraph 6 of the IB.

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents comprising the Bid: Eligibility and Technical Components

10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in Section VIII (NPCSF-GOODS-01 - Checklist of Technical and Financial Documents).

10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed within Ten (10) Years prior to the deadline for the submission and receipt of bids.

10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

10.4. The Statement of the bidder's Single Largest Completed Contract (SLCC) (NPCSF-GOODS-03) and List of all Ongoing Government & Private Contracts Including Contracts Awarded but not yet Started (NPCSF-GOODS-02) shall comply with the documentary requirements specified in the **BDS.**

11. Documents comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in Section VIII (NPCSF-GOODS-01 - Checklist of Technical and Financial Documents).

11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.

11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

12.1. Prices indicated on the Price Schedule shall be entered separately in the following manner:

a. For Goods offered from within the Procuring Entity's country:

i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);

ii. The cost of all customs duties and sales and other taxes already paid or payable;

iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and

iv. The price of other (incidental) services, if any, listed in the **BDS.**

b. For Goods offered from abroad:

i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.

ii. The price of other (incidental) services, if any, as listed in the **BDS.**

13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in Philippine Pesos.

14. Bid Security

14.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

14.2. The Bid and bid security shall be valid for **One Hundred Twenty (120) calendar** days from the date of opening of bids. Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each Bidder shall submit Two (2) copies of the first and second components of its Bid, marked **Original** and photocopy. Only the original copy will be read and considered for the bid.

Any misplaced document outside of the **Original** copy will not be considered. The photocopy is ONLY FOR REFERENCE.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

Bidders must also comply with the Disclaimer and Data Privacy Notice specified in the **BDS**.

16. Deadline for Submission of Bids

16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

17. Opening and Preliminary Examination of Bids

17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Domestic Preference

18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB** Clause 14 shall be submitted for each lot or item separately.

19.3. The descriptions of the lots or items shall be indicated in **Section VI (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the

2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.

19.4. The Project shall be awarded to one (1) Bidder in one complete contract.

19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

20.1. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

SECTION III

BID DATA SHEET

SECTION III - BID DATA SHEET

ITB Clause	
5.3	For this purpose, similar contracts shall refer to supply, delivery, installation & test or upgrading of dam and water reservoir flood forecasting/early warning systems. The Single Largest Completed Contract (SLCC) as declared by the bidder shall be verified and validated to ascertain such completed contract. Hence, bidders must ensure access to sites of such projects/equipment to NPC representatives for verification and validation purposes during post-qualification process. It shall be a ground for disqualification, if verification and validation cannot be conducted for reasons attributable to the Bidder.
7.1	Subcontracting may be allowed on transport, local/non-skilled labor under the supervision of the Bidder. The Bidder shall not be relieved from any liability or obligation that may arise from the performance of the Subcontractor.
10.1	The prospective bidder shall submit a valid and updated Certificate of PhilGEPs Registration under Platinum Membership (all pages including the Annex A of the said Certificate). **Non-compliance shall be a ground for disqualification.**
10.4	The list of on-going contracts (Form No. NPCSF-GOODS-02) shall be supported by the following documents for each on-going contract to be submitted during **Post-Qualification:** 1. Contract/Purchase Order and/or Notice of Award 2. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date The bidder shall declare in this form all his on-going government and private contracts including contracts where the bidder (either as individual or as a Joint Venture) is a partner in a Joint Venture agreement other than his current joint venture where he is a partner. Non declaration will be a ground for disqualification of bid.
	The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid (Form No. NPCSF-GOODS-03) shall be supported by the following documents to be submitted during **Bid Opening:** 1. Certificate of Acceptance; or Certificate of Completion; or Official Receipt (O.R); or Sales Invoice
	Any single bidder/s who already procured/secured the bidding documents but want to avail the Joint Venture Agreement (JVA) shall inform the BAC in writing prior to the bid opening for records and documentation purposes.

10.5	Bidders shall aiso submit the following requirements in their first envelope, Eligibility and Technical Component of their bid: 1. Data and Information to be submitted with the Proposal as specified in Clause TS-9.0(a) of Section VI - Technical Specifications; 2. Complete eligibility documents of the proposed sub-contractor, if any
12	The price of the Goods shall be quoted DDP Project Site or the applicable International Commercial Terms (INCOTERMS) for this Project.
14.1	The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts: a) The amount of not less two percent (2%) of ABC, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b) The amount of not less than five percent (5%) of ABC, if bid security is in Surety Bond.
15.0	All bid submissions and related correspondences are confidential and for viewing only by the intended recipient/s. Any unauthorized access to review, reproduce, or disseminate the information contained therein is strictly prohibited. The National Power Corporation (NAPOCOR) does not guarantee the security of any information electronically transmitted. Bid submissions and related correspondences may contain personal and sensitive personal information, and are subject to the Data Privacy Act of 2012, its implementing rules, regulations and issuances of the National Privacy Commission of the Philippines ("Privacy Laws"). By viewing, using, storing, sharing and disposing (collectively "Processing"), such bids submissions and correspondences, you agree to comply with the Privacy Laws. By responding to correspondence, you consent to the Processing by NAPOCOR of the Personal Data contained in your submission/reply in accordance with NAPOCOR's Personal Data Privacy Policy which you can find at http://www.napocor.gov.ph. To report any privacy issue, contact the Data Privacy Officer at dpo@napocor.gov.ph. NAPOCOR is not liable for the proper and complete transmission of the information contained in bid submission/correspondences nor for any delay in its receipt.
19.3	The Goods are grouped together in one (1) lot and will be awarded to one (1) Bidder in one complete contract. Partial bid is not allowed. The Goods are grouped in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award. The Bidders bid offer must be within the ABC of the lot.

	Bid offers that exceed the ABC of the lot or with incomplete price, shall be rejected.
19.5	If the Bidder opted to submit a Committed Line of Credit (CLC), the bidder must submit a granted credit line valid/effective at the date of bidding.
20.1	Additional documents to be submitted during Post-Qualification: a. Class A – Eligibility Documents listed on the Annex A of Certificate of PhilGEPs Registration under Platinum Membership pursuant to Section 34.3 of the Revised IRR of R.A. 9184 b. Contract/Purchase Order and/or Notice of Award for the contracts stated in the List of all Ongoing Government & Private Contracts Including Contracts Awarded but not yet Started (NPCSF-GOODS-02); c. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date for all ongoing contracts stated in Form NPCSF-GOODS-02; d. Contract/Purchase Order for the contract stated in the Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid (Form No. NPCSF-GOODS-03) e. Documents to be submitted during post-qualification process as specified in TS-9.0(b) of Section VI-Technical Specifications Manufacturer's brochures, manuals and other supporting documents of equipment, materials, hardware and tools proposed by the bidders must comply with the technical specifications of such equipment, materials, hardware and tools. It shall be a ground for disqualification if the submitted brochures, manuals and other supporting documents are determined not complying with the specifications during technical evaluation and post-qualification process. Equipment, materials, hardware and tools proposed by the winning bidder to be supplied, which were evaluated to be complying with the technical specifications, shall not be replaced and must be the same items to be delivered/installed/used during the contract implementation. Any proposed changes/replacement of said items may be allowed on meritorious reasons subject to validation and prior approval by NPC.
20.2	The licenses and permits relevant to the Project and the corresponding law requiring it as specified in the Technical Specifications, if any.
21.2	Notice to Proceed.

SECTION IV

GENERAL CONDITIONS OF CONTRACT

SECTION IV – GENERAL CONDITIONS OF CONTRACT

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SECTION IV – GENERAL CONDITIONS OF CONTRACT

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract (SCC).**

2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex "D" of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

3. Performance Security

3.1. Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184.

3.2. The performance bond to be posted by the Contractor must also comply with additional requirements specified in the **SCC.**

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC**, **Section VI (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

5. Warranty

5.1 In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.

5.2 The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

SECTION V

SPECIAL CONDITIONS OF CONTRACT

SECTION V – SPECIAL CONDITIONS OF CONTRACT

GCC Clause	
1	**Delivery and Documents –** The delivery terms applicable to the Contract is DDP delivered to the project site specified in the technical specifications, in accordance with INCOTERMS. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination. Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI – Technical Specifications. The details of shipping and/or other documents to be furnished by the Supplier are as follows: *For Goods supplied from within the Philippines* Upon delivery of the Goods to the Project Site, the Supplier shall notify the Procuring Entity and present the following documents to the Procuring Entity: (i) Original and four copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount; (ii) Original and four copies of Supplier's factory test/inspection report; (iii) Original and four copies of the certificate of origin (for imported Goods); (iv) Delivery receipt detailing number and description of items received signed by the Procuring Entity's representative at the Project Site; (v) Certificate of Completion/Inspection Report signed by the Procuring Entity's representative at the Project Site; (vi) Original and four copies of the Inspection Receiving Report signed by the Procuring Entity's representative at the Project Site; (vii) Original and four copies of the Manufacturer's and/or Supplier's warranty certificate; and (viii) Documents specified in the Technical Specifications, if any. *For Goods supplied from abroad:* Upon shipment, the Supplier shall notify the Procuring Entity and the insurance company by e-mail the full details of the shipment, including Contract Number, description of the Goods, quantity, vessel, bill of lading number and date, port of loading, date of shipment, port of discharge etc. Upon delivery to the Project Site, the Supplier shall notify the Procuring Entity and present the following documents as applicable with the documentary requirements of any letter of credit issued taking precedence: (i) Original and four copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;

	(ii) Original and four copies of the negotiable, clean shipped on board bill of lading marked "freight pre-paid" and five copies of the non-negotiable bill of lading; (iii) Original and four copies of Supplier's factory test/inspection report; (iv) Delivery receipt detailing number and description of items received signed by the Procuring Entity's representative at the Project Site; (v) Certificate of Completion/Inspection Report signed by the Procuring Entity's representative at the Project Site; (vi) Original and four copies of the Inspection Receiving Report signed by the Procuring Entity's representative at the Project Site; (vii) Original and four copies of the certificate of origin (for imported Goods); and (viii) Original and four copies of the Manufacturer's and/or Supplier's warranty certificate including all other documents specified in the Technical Specifications, if any. For purposes of this Clause the Procuring Entity's Representative at the Project Site is VP - Power Engineering Services. **Incidental Services –** The Supplier is required to provide all of the following services, including additional services, if any, specified in Section VII - Schedule of Requirements: 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 Procuring Entity's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods. f. Additional requirements specified in Section VI – Technical Specifications, if any. The Contract price for the Goods shall include the prices charged by the Supplier for incidental services and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

Spare Parts –

The Supplier is required to provide all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

1. such spare parts as the Procuring Entity may elect to purchase from the Supplier, provided that this election shall not relieve the Supplier of any warranty obligations under this Contract; and

2. in the event of termination of production of the spare parts:

    i. advance notification to the Procuring Entity of the pending termination, in sufficient time to permit the Procuring Entity to procure needed requirements; and

    ii. following such termination, furnishing at no cost to the Procuring Entity, the blueprints, drawings, and specifications of the spare parts, if requested

The spare parts and other components required are listed in **Section VI (Technical Specifications)** and **Section VII (Schedule of Requirements/Bid Price Schedule)** and the costs thereof are included in the contract price.

The Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spare parts or components for the Goods for the period specified in the Technical Specifications.

Spare parts or components shall be supplied as promptly as possible, but in any case, within three (3) months of placing the order.

Packaging –

The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging 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.

The packaging, 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 below, and in any subsequent instructions ordered by the Procuring Entity.

The outer packaging must be clearly marked on at least four (4) sides as follows:

Name of the Procuring Entity
Name of the Supplier
Contract Description
Final Destination
Gross weight

	Any special lifting instructions Any special handling instructions Any relevant HAZCHEM classifications A packaging list identifying the contents and quantities of the package is to be placed on an accessible point of the outer packaging if practical. If not practical the packaging list is to be placed inside the outer packaging but outside the secondary packaging. **Transportation –** Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged and paid for by the Supplier, and the cost thereof shall be included in the Contract Price. Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price. Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure. The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination. **Intellectual Property Rights –** The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.
2.2	Advance payment not to exceed fifteen percent (15%) of the contract amount shall be allowed and paid within sixty (60) calendar days from effectivity of the contract and upon the submission to and acceptance by the Procuring Entity of an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank. The irrevocable letter of credit or bank guarantee must be for an equivalent amount, shall remain valid until the goods are delivered, and accompanied by a claim for advance payment.

All progress payments shall first be charged against the advance payment until the latter has been fully exhausted.

The terms of payment shall be as follows:

1) For Supply and Delivery Contracts:

(a) On Contract Effectivity: Advance payment of Fifteen percent (15%) of the total Contract Price shall be paid within sixty (60) days from effectivity of the Contract and upon submission of a claim and an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII- Bidding Forms.

(b) On Delivery: Eighty percent (80%) of the Contract Price of the ***delivered Goods*** shall be considered for payment, less the total amount of advance payment, if any and other deductions. If the amount is sufficient to fully recoup the advance payment, the remainder after deductions shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the SCC provision on Delivery and Documents. Otherwise, the total delivery payment shall be charged against the advance payment and the remaining advance payment will be fully recouped from the succeeding claims.

(c) On Acceptance: The remaining twenty percent (20%) of the Contract Price of the ***delivered Goods*** shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity's authorized representative. In the event that no acceptance certificate is issued by the Procuring Entity's authorized representative within forty five (45) days after successful test and commissioning, if required, the Supplier shall have the right to claim payment of the remaining twenty percent (20%) subject to the Procuring Entity's own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the SCC provision on Delivery and Documents.

2) For Supply, Delivery, Installation, Test and Commissioning Contracts:

(a) On Contract Effectivity: Advance payment of Fifteen percent (15%) of the total Contract Price shall be paid within sixty (60) days from effectivity of the Contract and upon submission of a claim and an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII- Bidding Forms.

(b) On Delivery: Eighty percent (80%) of the price of the **delivered Goods,** excluding price for installation, test and commissioning shall be considered for payment, less the total amount of advance payment, if any and other deductions. If the amount is sufficient to fully recoup the advance payment, the remainder after deductions shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the

SCC provision on Delivery and Documents. Otherwise, the total delivery payment shall be charged against the advance payment and the remaining advance payment will be fully recouped from the succeeding claims.

(c) On Acceptance: The remaining twenty percent (20%) of the price of the **delivered Goods** plus price for installation, test and commissioning shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity's authorized representative. In the event that no acceptance certificate is issued by the Procuring Entity's authorized representative within forty five (45) days after successful test and commissioning, the Supplier shall have the right to claim payment subject to the Procuring Entity's own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the SCC provision on Delivery and Documents.

3) For Supply, Delivery, Installation, Test and Commissioning Contracts where Installation, Test and Commissioning prices are included in the supply price:

(a) On Contract Effectivity: Advance payment of Fifteen percent (15%) of the total Contract Price shall be paid within sixty (60) days from effectivity of the Contract and upon submission of a claim and an irrevocable letter of credit or bank guarantee issued by a Universal or Commercial Bank for the equivalent amount valid until the Goods are delivered and in the form provided in Section VIII- Bidding Forms.

(b) On Delivery: Sixty percent (60%) of the price of the **delivered Goods** shall be considered for payment, less the total amount of advance payment, if any and other deductions. If the amount is sufficient to fully recoup the advance payment, the remainder after deductions shall be paid to the Supplier within sixty (60) days after the date of receipt of the Goods and upon submission of the documents (i) through (vi) specified in the SCC provision on Delivery and Documents. Otherwise, the total delivery payment shall be charged against the advance payment and the remaining advance payment will be fully recouped from the succeeding claims.

(c) On Acceptance: The remaining forty percent (40%) of the price of the **delivered Goods** shall be paid to the Supplier within sixty (60) days after the date of submission of the acceptance and inspection certificate for the respective delivery issued by the Procuring Entity's authorized representative. In the event that no acceptance certificate is issued by the Procuring Entity's authorized representative within forty five (45) days after successful test and commissioning, the Supplier shall have the right to claim payment subject to the Procuring Entity's own verification of the reason(s) for the failure to issue documents (vii) and (viii) as described in the SCC provision on Delivery and Documents

3.2	1. The following must be indicated in the performance bond to be posted by the Contractor: i. Company Name ii. Correct amount of the Bond iii. Contract/Purchase Order Reference Number iv. Purpose of the Bond: "To guarantee the faithful performance of the Principal's obligation to undertake *(Contract/Purchase Order Description)* in accordance with the terms and conditions of *(Contract No. & Schedule/Purchase Order No.)* entered into by the parties." 2. The bond shall remain valid and effective until the duration of the contract *(should be specific date reckoned from the contract effectivity)* plus sixty (60) days after NPC's acceptance of the last delivery/final acceptance of the project. 3. In case of surety bond, any extension of the contract duration or delivery period granted to the CONTRACTOR shall be considered as given, and any modification of the contract shall be considered as authorized, as if with the expressed consent of the surety, provided that such extension or modifications falls within the effective period of the said surety bond. However, in the event that the extension of the contract duration or delivery schedule would be beyond the effective period of the surety bond first posted, it shall be the sole obligation of the CONTRACTOR to post an acceptable Performance Security within ten (10) calendar days after the contract duration/delivery period extension has been granted by NPC. 4. Other required conditions in addition to the standard policy terms issued by the Bonding Company: i. The bond is a penal bond, callable on demand and the entire amount thereof shall be forfeited in favor of the Obligee upon default of the Principal without the need to prove or to show grounds or reasons for demand for the sum specified therein; ii. The amount claimed by the Obligee under this bond shall be paid in full and shall never be subject to any adjustment by the Surety; iii. In case of claim, the Surety shall pay such claim within sixty (60) days from receipt by the Surety of the Obligee's notice of claim/demand letter notwithstanding any objection thereto by the Principal.
4	The inspections and tests that will be conducted are specified in the Technical Specifications.

SECTION VI

TECHNICAL SPECIFICATIONS

PART I –

TECHNICAL SPECIFICATIONS

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Section VI – Technical Specifications

PART I – TECHNICAL SPECIFICATIONS

TS-1.0 GENERAL

This specification covers the technical requirements for the **UPGRADING OF THE REMAINING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT.**

All supplied instruments and accessories shall be new and unused. They shall be suitable for the intended purpose and comply with all applicable regulations, quality, and dimension standards.

The Bidder shall accept full responsibility for his work, including documentation, preparation for shipment, inspection, warranty provisions, and compliance with the applicable codes and standards and the requirements of this Specification.

TS-2.0 SCOPE OF WORK

The scope of works shall cover but not limited to the following:

URGENT

1. Upgrading of thirteen (13) old warning station equipment and one (1) repeater station, devices and their respective parts and accessories across various San Roque Dam Warning Stations.

2. Supply, installation, test, and commissioning of new Supervisory and Control software and associated equipment at the NPC San Roque Flood Forecasting and Warning System Dams Operations (FFWSDO) Master Station.

3. Supply, installation, programming, and configuration of the system's necessary Application Software(s), including a remote portable supervisory controller.

4. Supply/provide recommended spare parts, special equipment/devices/tools/instruments, and consumables required during implementation, testing, and commissioning to complete the upgrading project successfully and system repair and maintenance.

5. Conduct overall testing and commissioning of the entire system.

6. Prepare plans, drawings, and network diagrams related to the project.

7. Provide support services upon request and submission of problem identification analysis from NPC during the warranty period in case of any system abnormality at no cost to NPC.

9. Perform clean-up of work areas after completing the contracted work.

The following shall be included in the Bidder's scope of work:

1. The Bidder shall be responsible for visiting the delivery site and referring to its accessibility, means of transportation, and all other factors that should be considered in the contract.
2. The Bidder shall conduct site inspections duly signed by the NPC representative to verify and assess the extent of the related and incidental works needed to implement the job competently and efficiently.
3. Provide equipment, tools, instruments, and consumables necessary during equipment testing for satisfactory completion of the work; and

The scope of work encompasses all tasks and services necessary for the system's comprehensive and successful implementation, ensuring its safe and reliable operation. This includes any additional work and services that may not be explicitly mentioned in this document but are essential for achieving the system's complete functionality and readiness.

TS-3.0 PROJECT DURATION AND LOCATION

The contract shall be **ONE HUNDRED FIFTY (150) CALENDAR DAYS** from receipt of NTP.

The works/activities shall be done at the following locations:

Station Names	Latitude	Longitude
NPC San Roque FFWSDO Office *San Roque, San Manuel, Pangasinan - Master Station*	16°07'56.2"N	120°40'46.6"E
San Roque Warning Station	16°06'10.0"N	120°40'43.2"E
Sta. Ana Warning Station	16°01'24.7"N	120°42'30.5"E
Cal-litang Warning Station	15°56'33.9"N	120°39'29.0"E
Carusucan Warning Station	15°57'54.3"N	120°38'11.3"E
Piaz Warning Station	15°56'04.3"N	120°37'11.9"E
Sto. Tomas Warning Station	16°05'03.5"N	120°44'07.5"E
San Vicente West Warning Station	16°03'57.9"N	120°42'17.9"E
Bantog Warning Station	16°00'35.3"N	120°41'27.8"E
San Blas Warning Station	15°54'18.9"N	120°36'00.5"E
Sto. Tomas (Town) Warning Station	15°52'41.7"N	120°34'58.5"E
Alcala Warning Station	15°50'50.6"N	120°31'16.5"E
Bautista Warning Station	15°48'35.9"N	120°27'21.8"E
Bayambang Warning Station	15°48'39.7"N	120°28'34.7"E
Cuyapo Repeater Station	15°48'2.35"N	120°39'32.69"E

TS-4.0 CODES AND STANDARD

The equipment furnished shall be by, but not limited to, the latest issues of the following codes and standards, including all appendices, in effect at the time of purchase order unless otherwise stated in this specification:

1. American National Standards Institute	ANSI
2. Institute of Electrical and Electronic Engineers	IEEE
3. Electronics Industries Association	EIA
4. National Electrical Manufacturer's Association	NEMA
5. Underwriters Laboratory	UL
6. International Electro-Technical Commission	IEC
7. International Organization for Standardization	ISO
8. National Electrical Code	NEC
9. National Electrical Safety Code	NESC
10. Philippine Electrical Code	PEC
11. Philippine Electronic Code	PEC
12. Japanese Industrial Standards	JIS
13. Japanese Electrical Standards	JES
14. Philippine National Standards	PNS
15. World Meteorological Organization Standards	WMO

The latest edition of each standard shall mean the latest edition available at the date of contract signing.

In addition to the above codes and standards, the Bidder shall comply with all National and local laws, codes, regulations, statutes, and ordinances.

Equipment or materials meeting other internationally accepted standards, which ensure an equal or higher quality than the standards mentioned, will also be taken.

In the event of any apparent conflict among standards, codes, or this specification, the Bidder shall refer the dispute to NPC for written resolution before the start of fabrication. The final decision regarding the acceptance of proposed standards is NPC's prerogative.

Standards listed in the equipment specification are used mainly for NPC's references. Other internationally known standards, however, shall also apply, provided such means are equivalent in all respects to the standard prescribed and to the specific requirements described in the individual equipment specification. The Bidder shall submit copies of such measures for NPC's review and approval.

TS-5.0 WORKMANSHIP

Quality shall be first-class and by the best modern engineering practice for manufacturing, assembly, installation, testing, and commissioning of all materials and equipment. All works shall be done by personnel skilled in the related professions and trades. All parts shall be made accurately to standard gauges to facilitate replacement and repairs. All special gauges and templates necessary for filed erection shall become the property of NPC.

All materials supplied under this contract shall be new, unused, free of defects or irregularities, and best available considering durability, strength, intended service suitability, and best engineering practice.

All parts shall conform to the dimensions shown and be built by the approved drawings. The surface finish of all parts and components shall work with the respective strength, fit, and service requirements.

The parts or components shall be designed and arranged so they can be quickly inspected, cleaned, erected, and dismantled without involving large-scale dismantling. They shall be designed and manufactured according to the latest recognized quality rules and modern engineering practices.

The Bidder shall be responsible for all the damages during the project's implementation. Any equipment (existing and new) and facilities that will be damaged shall be replaced and repaired by the Bidder at no additional cost to NPC.

TS-6.0 TECHNICAL REQUIREMENTS

TS-6.1 General

This specification covers the minimum technical and associated requirements for the materials and equipment included in the scope of work under this project. The project's needs are indicated in the Technical Data Sheets, and the equipment details are in the same section and volume of the Specification.

NPC intends to specify only some technical requirements or set those requirements adequately covered by applicable codes and standards. The Bidder shall furnish high-quality equipment/ device/ material meeting the provisions of these specifications and industry standards.

No deviation shall be made from these specifications and standards unless waived or modified in writing by NPC. The Bidder shall obtain a statement on compliance with this specification from its sub-bidders without exception. If there are any exceptions, these shall be described in detail and included in the Bidder's proposal. The Bidder shall add that no other exemptions are taken to this specification.

The Bidder shall bear full responsibility that the equipment has been designed, manufactured, and fabricated by all codes, standards, and applicable governmental regulations and performs under the conditions to the criteria specified herein.

TS-6.2 System Requirements

TS-6.2.1 Warning System

The Bidder is responsible for upgrading several existing San Roque Dam Warning Stations, including the master station, to effectively fulfill the fundamental requirements of Early Flood Warning Stations as follows:

a. Warning Siren — Sound Warning
b. Warning Broadcast — Spilling Operation Warning Messages
c. Warning Beacon — Light Warning
d. Warning Message Board — Visually Read Messages

TS-6.2.2 System Operation

The Operation of the dam discharge or spilling warning system is outlined as follows:

a. The master station can be operated manually and through a computer interface. The master station controls the warning stations and carries out the necessary operations for dam discharge warnings, including activating sirens/artificial sounds, broadcasting warning messages (live or pre-recorded voice messages), and activating warning lights and visual warning displays. Additionally, the master station must have a data storage system with a relational database for recording control events. This data can be printed out and displayed, showing the operation results based on the responses received from the controlled warning stations.

b. The warning stations are responsible for performing the warning operations as described above. They respond to control signals from the master station by generating audible alarms, activating lights, or displaying pop-up messages with corresponding event recordings to indicate successful operation.

TS-6.2.3 Warning System Capability and Features

The control items for the new warning system must possess the following capabilities and features:

	Control Item	Control Mode
1.	Siren and Artificial Sound	Individual or All Station Simultaneous
2.	MIC Broadcast Start then Stop	Individual
3.	Recorded Voice Message for Warning Broadcasts at the Master Station	Individual/ All Station Simultaneous/ All Stations Synchronized
4.	Check / Supervisory Control	Individual/ All Station Simultaneous/ All Stations Synchronized
5.	Warning Lights (On/Off)	Individual/Synchronized
6.	Visually Read Warning Messages	Individual/Synchronized
7.	Broadcast from each Warning Station	Individual
8.	Forced Stop	Individual or All Station Simultaneous

TS-6.2.4 System Function

The dam discharge or spilling warning system shall operate according to the following functions:

Control Mode

The control mode function is implemented at the master station and the site controllers, enabling data transmission, alarm detection and sending, and communication between stations. Various control items have specific patterns or selections that determine their capability to save and store sequences or pre-recorded messages based on assigned values.

The warning control operations are listed below:

Individual Control

Only one selected warning station can be manually controlled using the following control items:

Control Item	Pattern/Selection
Siren	
Artificial Sound	Pattern 1
Recorded Voice Message Broadcast	Pattern 1-4
Microphone Broadcast	
Forced Stop	
Check / Supervision	
Warning Lights	Selection 1-4
Visually Read Messages	Pattern 1-4
Warning Station Local Broadcast	Pattern 1-4

Sequential Control

All stations shall be controlled sequentially in a predetermined order without time intervals between stations at the master station. The control items for sequential control are:

Control Item	Pattern/Selection
Recorded Voice Message Broadcast	Pattern 1-4
Warning Lights	Selection 1-4
Visually Read Messages	Pattern 1-4
Forced Stop	
Check	
Supervision	

Simultaneous Control

All stations shall be controlled simultaneously at the master station. The control items for simultaneous control are:

Control Item	Pattern/Selection
Siren	Pattern 1
Artificial Sound	
Microphone Broadcast	Pattern 1-4
Recorded Voice Message Broadcast	Selection 1-4

Control Item	Pattern/Selection
Warning Lights	Pattern 1-4
Visually Read Messages	
Forced Stop	

1. Warning Operations

a. Control commands from the master station:

Siren or Artificial Sound

When the command "Siren or Artificial Sound" is issued, the warning system shall activate a loud or amplified siren or artificial sound through the speakers.

Microphone Broadcast

Upon receiving the "MIC Broadcast Start" command, a warning station shall initiate an amplified chime sound, followed by live voice messages transmitted from the master station. To conclude the broadcast, the order "Microphone Broadcast Stop" shall be given from the master station, and the warning station shall rebroadcast the chime sound as an indication of stopping the broadcasting operation.

Recorded Voice Message for Warning Broadcast

When the command "Recorded Voice Message for Warning Broadcast" is directed, the supervisory/control equipment shall play a pre-recorded voice message and deliver it to the warning station(s) or trigger the playing of any recorded voice message available at the warning station(s). The amplified voice message will be broadcast through the warning station's loudspeaker, along with a chime or selected warning sound before and after the pre-recorded voice message.

Forced Stop

If the command "Forced Stop" is issued, any ongoing warning control or broadcasting operation to the warning station(s) will be canceled or forcibly stopped.

Check / Supervision

The command "Check" prompts the warning station to inspect its conditions to determine whether artificial sounding and voice broadcasting are possible. When "Supervision" is directed, the warning station shall return to its present status.

The master station can send supervisory checks to verify the status of the warning stations.

Warning Lights (On/Off)

The warning station shall activate the selected warning light by selecting "Warning Lights On" from three available light color options corresponding to specific warning messages representing various dam discharge or spilling warning notices. Activating a different warning light shall automatically turn off the others. The command "Warning Lights Off" shall turn off any active warning light. Additionally, the warning lights can be synchronized with the activation of pre-recorded voice messages for warning broadcasts, enhancing operation convenience.

Message Board

The message board should be synchronized with the Recorded Voice Message for Warning Broadcast. Selecting a specific pre-recorded voice message for dam discharge warnings shall trigger the corresponding warning message to be displayed on the message board.

b. Control commands from the warning station:

Siren or Artificial Sound

Upon receiving the command "Siren or Artificial Sound," the warning station shall emit a loud or amplified siren or artificial sound through its speakers.

Warning Station Local Broadcast

For "Warning Station Local Broadcast," the warning station can manually select and play a pre-recorded voice message for a warning broadcast available locally. The amplified voice message will be broadcast through the warning station's loudspeaker, along with a chime or selected warning sound before and after the pre-recorded voice message.

Warning Lights (On/Off)

The warning station shall be allowed to manually control the "On" or "Off" warning light corresponding to a specific warning message. The warning station must be capable of activating or deactivating the warning light as required.

Message Board

In a local operation scenario, the message board at the warning station should be synchronized with the playback of the pre-recorded voice message for the warning broadcast.

2. Confirmation of Warning Operation

When the master station controls the warning station, the warning station should provide a return response or indication to confirm the completion of the operational status. The answer may include an audible tone, alarm

sound, operation confirmation signal, or station status indicator, such as a light or pop-up message with a corresponding event recording.

The content of response signals for each control command is as follows:

a. Complete Operation Confirmation Response

The warning station shall provide a complete operation confirmation response through sound or alarm, light indicator, or pop-up message. Each operation result must be recorded for traceability and event printing as necessary.

b. Microphone Broadcast

Upon receiving the "Microphone Broadcast" command, the warning station will play an amplified chime sound, which will be collected and returned to the master station or supervisory computer to indicate station readiness or any equivalent movement. Subsequently, the warning station shall produce an operation confirmation signal indicating "Station Ready" status at the supervisory computer, signifying the voice amplifier's start wherein the microphone broadcast can proceed. After the actual message is broadcast, the "Broadcast Stop" command will be directed.

c. Recorded Voice Message for Warning Broadcast

When the command "Recorded Voice Message for Warning Broadcast" is directed, the warning station shall play an amplified chime sound, which will be collected and returned to the master station or supervisory computer to indicate the start of the warning broadcast. This serves as confirmation that the station has been triggered. Subsequently, the warning station shall play the recorded warning message while collecting and forwarding it to the master station or supervisory computer to verify the ongoing broadcast at the selected warning station. After the recorded message broadcast is completed, the chime or desired sound will play again to indicate the end of the warning broadcast, and a complete operation indication will be observed at the master station.

d. Broadcast/Forced Stop

Upon receiving the "Broadcast/Forced Stop" command, the warning station shall stop or interrupt any completed or ongoing warning broadcast. It shall automatically play the broadcast chime or selected sound and transmit an operation confirmation signal to the master station or supervisory computer, representing the broadcast stop of the voice amplifier and indicating the ready status of the station after the stop command.

e. Check/Supervisory

When the command "Check" or "Supervisory" is issued, the warning station shall provide a sound or acceptable indicator as a response.

Subsequently, an operation confirmation signal shall be returned, indicating the checked result and the operational status of the station.

3. Operation Record and Printing

Upon receiving response signals from the warning stations, the master station or supervisory computer shall perform the following operations:

a. Recordkeeping

The date, time, control mode, station name, control item, control result, and supervisory items related to a specific control, equipment, device, accessories, and peripherals shall be recorded.

b. Printing

Printing functionality shall be available to generate hard copies of the recorded operation events and completed check/supervisory operations.

c. Faulty Operation Handling

In case of a faulty operation detection, the detected error shall trigger an alarm or warning indication. The detected error shall be automatically printed for troubleshooting and repair.

Data Field Configuration for Event Recording

To ensure system compatibility and adequate transmission/reception of codes and communication protocols, the Data Field Configuration from Remote Station should include the following:

a. Message Count
b. Station ID
c. Station Type
d. Update Interval
e. Date and Time Stamp
f. Data Information per Station
g. Solar Panel Status (Connected/Disconnected)
h. Battery Voltage
i. Station Door Status (Open/Close)
j. Station Status (Operational/Fault Detection)

By incorporating these data fields, the system can capture and record relevant information for each event, allowing for detailed tracking and analysis. Additionally, historical data and recorded events should be easily accessible for printing, reference, and documentation. This ensures that the system check, control, warning operations, and historical data are readily available for analysis, troubleshooting, and maintaining comprehensive documentation.

4. Display

Upon receiving a return signal from the warning stations, the master station shall display the selected control item and its corresponding status signal.

5. Voice Communication

The system enables voice communication between the master station and warning stations. Control commands to the warning stations take priority over voice communication.

6. Computer Operation

Computer operation is essential at the master station for controlling supervisory equipment and warning stations. Computer-based control allows for automated processes and management of warning stations, eliminating the need for manual control and enhancing operational efficiency.

7. Data Storage with Relational Database System

The system shall include data storage functionality with a relational database system. This database shall serve as a repository for storing and organizing saved or recorded sequences of events derived from equipment checks, control operations, and overall operation of the warning stations.

TS-6.3 Equipment Specifications

The project involves upgrading thirteen (13) warning stations at San Roque Dam, which includes the installation and interconnection of master supervisory and control equipment, communication link equipment, antenna system, power supply system, and warning stations.

A fully functional and synchronized warning system capable of issuing timely alerts and warnings in response to dam discharge or spilling operations shall be provided. This upgraded system shall enhance the safety and reliability of the San Roque Dam by ensuring efficient communication and coordination among the warning stations and the central control hub.

TS-6.3.1 San Roque FFWSDO Master Station

TS-6.3.2 Master Supervisory and Control Equipment

The warning system requires supervisory and control equipment in the master station designed explicitly for warning broadcast purposes. This equipment shall effectively control the warning broadcast through the loudspeakers of the warning stations. The Warning Control and Supervisory Equipment are responsible for managing the functions of the warning stations, and the operation status should be provided through feedback indicators, displays, or audible and visible confirmation. The response signals sent back to the master station should be recorded and can be printed out for documentation purposes.

The warning control and supervisory equipment, which shall control the thirteen (13) warning stations, shall be available to expand to fifty (50)

warning stations when required. To ensure compliance and compatibility, these equipment specifications must adhere to the relevant Warning Equipment Standards.

TS-6.3.3 Supervisory Computers Console/Terminal Unit

The unit at the master station shall be able to process and execute commands as directed, manage the control mode for the warning stations, perform judgment of the controlled stations, generate answer signals, and conduct automatic checks. Control and monitor devices at the master station, which include:

i. Control Mode
ii. Warning Operation
iii. Confirmation of Operation

In terms of check control and failure information, the unit shall handle the following aspects:

i. Low Battery and Charge Failure
ii. Communication Network Failure
iii. Warning Devices Failure
iv. Door Open

Furthermore, the unit shall serve as a data storage system with a relational database. It shall process and store results and events from the stations' check, control, and operation, ensuring comprehensive documentation and traceability of system activities.

Technical Requirements

TS-6.3.3.1 Application Server

Requirements	Specifications
Type	Application server
CPU	Intel core i7 2.8GHz or higher
Memory	16GB RAM or higher
Storage 1 SSD	512GB or higher
Storage 2 HDD	2TB HDD or higher
Optical Drive	Dual Layer R/RW or better
Operating System (OS)	1. Licensed Windows 10 Pro or better 2. Licensed MS Office 2019 or better
Video Card (Plug-in)	8GB video graphics memory or higher
Display	27" Full-HD 1920 x 1080 resolution or better
Input/Output (I/O) Ports	USB ports, Audio ports, HDMI display port, RJ45 Ethernet
Peripheral Devices	USB Mouse and Keyboard
Power Supply	220VAC 60Hz
Broadcast Sound Device	Omnidirectional microphone, external HD audio module with noise reduction. Customized steel/metal master station table with lockable CPU cabinet

TS-6.3.3.2 Laptop Computer

The specification provides data acquisition and system configuration for programming the radio data transceivers, microcomputer controllers and switches, and back-up to the Supervisory Computer Console/Terminal Unit.

Requirements	Specifications
Type	Laptop computer
CPU	Intel core i7 2.4GHz or higher
Memory	16GB RAM or higher
Storage SSD	1TB or higher
Optical Drive, External	Dual Layer R/RW or better
Operating System	a) Licensed Windows 10 Pro or better b) Licensed MS Office 2019 or better
Video Card	4GB video graphics memory or higher
Display	15.6" Full-HD or better
Input/Output (I/O) Ports	USB, audio, HDMI, Ethernet RJ45, WiFi, Bluetooth
Built-in Peripheral Devices	Touchpad-mouse, keyboard, webcam, mic, speaker system
Power Supply	220VAC 60Hz power adaptor
Application Software with Hardware Interface	Warning system software, Security utilities, VHF radio programming software

TS-6.3.4 Communication Link Equipment

The communication link equipment facilitates monitoring warning stations in the San Roque Flood Forecasting and Warning System for Dam Operations by operators at the master station. It establishes a reliable and efficient communication network that lets operators receive real-time data and information from the warning stations. This communication link lets Operators monitor the warning stations' status, operations, and data readings. This allows for effective decision-making and timely response to potential flood events or dam operations.

TS-6.3.5 VHF Transceiver

The warning system necessitates utilizing VHF radio transceiver equipment operating within the frequency range of 136 to 174MHz. The transmitting and receiving frequency of the radio unit must align with the established frequency designated by NPC FFWSDO for warning purposes.

Careful consideration should be given to channel separation to prevent interference with nearby radio systems.

Technical Requirements

Requirements	Specifications
Communication Link Equipment	
Radio Operation	Conventional digital communication and data services

Requirements	Specifications
Frequency Range, VHF	136~174MHz
Channel Access	FDMA/TDMA
Common Air interference	NXDN
Channel Spacing	6.25/12.5 kHz, Digital
Operating Voltage	13.6V DC +/-15%
Frequency Stability	±0.5 ppm
Operating Temperature	Up to +60°C
Others	Programming Software and Cable
Transmitter	
Power Output	25–50 Watts
Spurious Emission	-73 dB
FM Hum and Noise	45 dB @ 25kHz, Analog
Audio Distortion	2%
Receiver	
Sensitivity, Digital	0.25uV @ 12.5kHz, 3%BER
Selectivity, Analog	80 dB @ 25 kHz, Analog
Spurious Rejection	80 dB
Audio Distortion	2%

The radio equipment utilized in the warning system should possess built-in safeguards to protect the transmitter from the antenna system opening and the receiver from excessive input and short-circuiting.

The radio equipment shall support sleep mode configuration, minimizing power utilization when a unit is idle or unused for a certain period.

To ensure proper housing and functionality, the radio equipment at the master station should be enclosed together with its power supply.

TS-6.3.6 Printer

The printers shall be utilized to print the records of operations and events for the warning stations and generate reports.

Technical Requirements

Requirements	Specifications
Type	Multi-function (copy, scan, and print)
Printing	Support monochrome and color.
Input Voltage	220VAC 60Hz
Interface	USB/Network
Printing Speed	33ppm (Black), and 15ppm (Color) or better
Ink Cartridge	Continuous multi-ink
Spare Ink Cartridge	To provide

TS-6.3.7 Power Supply System

TS-6.3.8 AC Connection and Distribution Board with AVR

The specifications involve preparing and connecting the AC supply for the system, including using appropriate power cables and installing a Power Distribution Board (PDB) for convenient input connection and efficient distribution of power outputs, whether AC or DC. The PDB should be equipped with a protection circuit to ensure safety. Additionally, an Automatic Voltage Regulator (AVR) shall be installed to maintain the required voltage, mitigating the effects of voltage fluctuations.

TS-6.3.9 Uninterrupted Power Supply

The Bidder shall install a double conversion on-line Uninterruptible Power Supply (UPS) to ensure a continuous power supply for the system's computers. The UPS shall consist of a series of connected AC-DC rectifiers/chargers and DC-AC inverters, guaranteeing reliable and stable power delivery. In the event of fault conditions, an additional bypass switch shall enable the system to support the loads directly from an AC source.

Technical Requirements

Requirements	Specifications
Nominal Input Voltage	220 VAC 60 Hz
Output Capacity	1kVA or higher
Back-up Time	9 minutes or more (for the entire operation)

TS-6.4 Warning Stations

The warning equipment for the warning stations shall adhere to the specifications of Warning Equipment Standards. It should incorporate high-quality digital recording capabilities for warning tones and messages. The kit should provide continuous operation for twenty (20) minutes of remote operation extension functionality, enabling control and function of the warning equipment from a remote location.

TS-6.4.1 Microcomputer Controller/Remote Terminal Unit (RTU)

The unit is a command controller responsible for executing and processing basic control modes and warning commands from the master station or control center. It manages the transmission protocol, conducts system tests, detects alarms, and routes warning orders to the amplifier. The unit also responds to the collected transmission, notifies the control center upon the completion of warning transmission, and generates alarms when necessary. Additionally, it enables direct broadcast to the loudspeaker through an attached microphone or by playing a selected sound or prerecorded message stored in its data memory or storage. Furthermore, the unit allows for direct switching on and off of warning lights, if desired, and facilitates the activation of messages on the LED message board.

The communication and operation mode of the system is facilitated through the base radio, with processing carried out by the microcontroller. The system supports the following ways:

Remote Operation

The system shall be capable of responding to selected or triggered commands from the control center or other expanded operation equipment or devices.

Report by Exception

When specific exception conditions are detected, the system automatically transmits alarm data to the control center. Examples of such conditions include opening the enclosure door or low battery voltage.

On-Site Operation

The system enables the execution of commands directly on-site. This allows for manual control and operation of the system in situations where immediate intervention is required.

Sleep Mode

The system shifts to sleep mode when the equipment is idle or unused for a certain period. This helps conserve power by reducing energy consumption during periods of inactivity.

Technical Requirements

Requirements	Specifications
Purpose	Warning Station Site Controller
System Function	Refer to TS-6.2.3
Field Configuration	Refer to TS-6.2.4
Recording	1GB storage capacity or higher
Sleep/standby Mode	Supported
Analog-to-Digital Conversion	Supported
I/O Ports	Analog, Digital, RS232 / Serial
Programming	To perform

TS-6.4.2 Amplifier

The voice amplifier at the warning station shall serve the purpose of amplifying and outputting the broadcasting of artificial sound, voices, or pre-recorded messages. These audio signals shall be received from either the master station or the station itself. The amplifier shall be equipped with functions for abnormal detection of the connected speakers, ensuring that any issues with the speaker are detected promptly. Additionally, the voice amplifier should include an operating protection timer to safeguard against potential problems and provide the proper functioning and longevity of the amplifier.

Technical Requirements

Requirements	Specifications
Type	Digital PA Amplifier
Input Voltage	12-24 VDC
Output	≥ 500W to be matched to the supplied loudspeaker units
Circuit Protection	Input Polarity, Output Short Circuit, or better

TS-6.4.3 Loudspeaker

The warning stations shall have horn speakers capable of broadcasting the amplified discharge warning sound, messages, and information within a specified range. These horn speakers must be designed to project warning signals effectively and ensure audibility within the designated area. Each warning station must also include a dummy speaker specifically for maintenance operations. The dummy speaker shall be capable of playing warning sounds, messages, and information when undergoing maintenance.

Technical Requirements

Requirements	Specifications
Type	Electronic, weatherproof speakers
Rated Output	≥ 125Watts 109dB at 30m omnidirectional (matched to the supplied PA amplifier unit)
Broadcast Range	▪ Audible within 350m for live-recorded PA ▪ 1km for Siren/Alarm function
Coverage	360° flood zone coverage
Material	Aluminum cast alloy or better
Input Voltage	12~24 VDC
Quantity	At least four (4) horn speakers per station
Safety Feature	Complete ground potential lightning protection
Others	Additional dummy speaker inside the Warning Station

TS-6.4.4 Warning Lights

The warning lights shall be implemented as an integral part of the warning system, comprising three (3) distinct colors representing various warning notices associated with dam discharge or spilling operations. These warning lights must be strategically installed at the warning posts near the antenna and speakers to ensure visibility from a considerable distance. This feature proves advantageous when the audibility of sound message warnings diminishes over greater distances. The warning lights play a crucial role in alerting individuals residing far away from the warning station, particularly during night-time operations, and those who may not be able to hear or comprehend the warning sound or message. They aim to provide a visual warning signal that effectively complements the audio warnings, ensuring that critical information reaches a broader audience and enhances safety awareness.

Technical Requirements

Requirements	Specifications
Type	LED lamp, Red, Yellow/Amber, Green
Rated Output	At least 3 Watts or visible even in the daytime
Housing	All weatherproof material
Input Voltage	12 – 24VDC
Quantity	One (1) set per station

TS-6.4.5 Outdoor LED Message Board

The warning system shall incorporate an LED message board to display warning notices related to dam discharge or spilling operations. The message board shall be prominently installed alongside the antenna and speakers at the warning post, ensuring maximum visibility from a significant distance. This feature proves invaluable when sound message warnings become less audible over long distances. The LED message board serves as a redundant warning mechanism, providing critical information to individuals approaching the warning station for verification purposes, regardless of whether it is during day or night operations. Furthermore, the LED message board caters to those who may not have heard the warning sound or message, ensuring that essential warnings are effectively communicated through visual and auditory means.

Technical Requirements

Requirements	Specifications
Type	Outdoor, programmable LED scrolling message
LED Color	Red
Housing	All weatherproof material
Input Voltage	12 — 24VDC
Board Size	6" x 24" or better
Operation	Remote and on-site

TS-6.4.6 Door Sensor / Switch

Each enclosure within the warning system shall be equipped with a door switch that detects the enclosure door's opening by unauthorized individuals or potential intruders. Upon being triggered by the opening of the enclosure door, the door switch shall promptly send a signal to the San Roque FFWSDO Monitoring Center via the warning equipment, acting as an alarm.

Technical Requirements

Requirements	Specifications
Type	Magnetic Contact
Contact Rating	10 VA
Conformance	UL Standard

TS-6.4.7 Equipment Box

The provision and installation of enclosure boxes for the warning equipment, devices, and associated parts and accessories shall be undertaken to ensure protection against exposure to environmental elements and moisture. These enclosure boxes shall be designed to safeguard the equipment from adverse weather conditions and humidity, ensuring reliable and uninterrupted operation. The enclosure boxes shall meet the necessary specifications to provide adequate protection, preventing potential damage or malfunctions due to exposure to external factors.

Technical Requirements

Requirements	Specifications
Type	Indoor and Outdoor as specific use and IP protection equivalent
Mounting	By Bidder
Size	By Bidder
Conformance	Acceptable Standard

TS-6.4.8 VHF Transceiver

The warning system shall utilize VHF radio transceiver equipment operating within the standard frequency range of 136 to 174 MHz.
The transmitting and receiving frequencies of the radio units must align with the existing frequency designated for warning purposes by NPC FFWSDO. Channel separation shall be carefully considered during the configuration of the radio units to prevent interference with nearby radio systems.

The radio equipment used in the warning system shall incorporate protective mechanisms to safeguard the transmitter and receiver against potential issues such as opening and short-circuiting of the antenna system and excessive input.

The radio equipment must also support sleep mode configuration to minimize power consumption when a unit is idle or unused for a certain period. Furthermore, the radio equipment at each warning station shall be securely housed within an enclosure that also accommodates its power supply.

Technical Specifications

Requirements	Specifications
Communication Link Equipment	
Radio Operation	Conventional digital communication and data services
Frequency Range, VHF	136~174MHz
Channel Access	FDMA/TDMA
Common Air interference	NXDN
Channel Spacing	6.25/12.5 kHz, Digital
Operating Voltage	13.6V DC +/-15%
Frequency Stability	±0.5 ppm

Requirements	Specifications
Operating Temperature	Up to +60°C
Others	Programming Software and Cable
Transmitter	
Power Output	25–50 Watts
Spurious Emission	-73 dB
FM Hum and Noise	45 dB @ 25kHz, Analog
Audio Distortion	2%
Receiver	
Sensitivity, Digital	0.25uV @ 12.5kHz, 3%BER
Selectivity, Analog	80 dB @ 25 kHz, Analog
Spurious Rejection	80 dB
Audio Distortion	2%

TS-6.4.9 VHF Repeater

A VHF Repeater System shall be provided on the following sites:

1. Sto. Tomas (Town) Warning Station
2. Alcala Warning Station
3. Bautista Warning Station
4. Bayambang Warning Station

The specification required for the warning system that makes use of VHF repeater equipment that operates at 136 – 174 MHz frequency range.

Transmitting and receiving frequency of the radio unit may use the existing frequency of NPC FFWSDO or apply new frequency for the Telemetry System. Channel separation shall be considered to avoid interferences with other nearby radio system.

Technical Requirements

1. Radio Operation
   a. Radio Frequency : Conventional Digital
   b. Frequency Range : 136–174 MHz, VHF
   c. Channel Access : FDMA
   d. Common Air Interference: NXDN
   e. Channel Spacing : 6.25/7.5/12.5/15 kHz, Digital
   f. Operating Voltage : 10.8 – 15.6V DC
   g. Frequency Stability : ±1.0 ppm
   h. Operating Temp. : -30°C to +60°C
   i. Others : Programming Software and Cable
2. Transmitter
   a. Power Output : 25–50 Watts
   b. FM Hum and Noise : 55 dB @ 25kHz, Analog
3. Receiver
   a. Sensitivity, Digital : 0.28uV @ 12.5kHz, 3%BER
   b. Selectivity, Analog : 83 dB @ 25 kHz, Analog

4. Duplexer
   a. Tuning Range : 148 ~ 174MHz
   b. No. Cavities : At least 4-units
   c. Frequency Separation : At least 4MHz (minimum)
   d. VSWR : ≤ 1.5:1
   e. Insertion Loss (TX/RX) : ≤ 1.0dB

The radio equipment shall have the means of protecting the transmitter and the receiver against opening and short-circuiting of the antenna system and excessive input, respectively.

The radio equipment at the repeater station shall be housed in an enclosure along with its power supply.

TS-6.5 Power Supply System

The power supply system is a vital component of the warning system, providing reliable and continuous electrical power to support the operation of various equipment and devices. It ensures the warning system remains functional even during power outages or fluctuations. Its primary purpose is to deliver stable and uninterrupted power to the warning stations, control center, and associated infrastructure.

TS-6.5.1 Solar Power

The solar power panels for the Warning Stations must meet stringent technical requirements to ensure a reliable and sustainable power supply. These requirements include mono-crystalline silicon photovoltaic cell technology, known for its efficiency and performance. The solar cell modules shall be constructed using high-quality materials and are encapsulated beneath high-efficiency tempered glass or modules, providing robust protection against environmental factors.

To guarantee long-term durability, the rear surface of the solar cell modules shall be completely sealed from moisture and mechanical damage using a continuous high-strength polymer sheet. Stringent testing shall be conducted to ensure that the modules comply with certification and regulatory standards, meeting industry benchmarks for quality and performance.

The solar panel must demonstrate a minimum power efficiency that surpasses the rated efficiency by at least 3% to ensure optimal utilization of available solar energy, maximizing power generation.

The frame of the solar cells shall be made of zinc hot-dip galvanized materials, offering excellent durability and corrosion resistance. The design shall incorporate metal fittings that adjust the incident angle of sunlight, enabling precise positioning to capture the maximum amount of solar radiation. The frame shall be bird-proof, preventing interference and nesting that could disrupt the operation of the solar panels.

To ensure stability, the solar panel shall be securely mounted stationary.

Technical Requirements

Requirements	Specifications
Type	Mono-Crystalline Silicon Photovoltaic Cell
Capacity	At least 100 Watts or higher
Voltage Output	18-38 VDC
Conformance	Acceptable Standard

TS-6.5.2 Charge Controller

The solar power supply system shall include a charge controller for the solar panel setup. The charge controller shall feature charging regulation, battery compatibility, maximum power point tracking (MPPT), load control, protection mechanisms, and monitoring and display.

Technical Requirements

Requirements	Specifications
Charge Controller Type	Integrated, MPPT
Max. Permissible Output and Load Current	By Bidder
Photovoltaic (PV) Array Short Circuit Protection	To be provided
PV Over Voltage Protection	To be provided
PV Over Current Protection	To be provided
PV Reverse Polarity Connection Protection	To be provided
Battery Reverse Polarity Protection	To be provided

TS-6.5.3 Battery Storage

The Warning Stations' solar power supply system batteries shall be solar-charged 12 VDC sealed valve-regulated lead-acid (VRLA) type. The casing of the batteries shall be constructed using polypropylene material with a thermally welded case-to-cover bond. The use of VRLA batteries ensures maintenance-free operation and enhances the overall efficiency and reliability of the solar power system.

Technical Requirements

Requirements	Specifications
Type	Sealed Lead-Acid, Maintenance Free or better
Plate	Lead-Calcium Alloy
Terminal	To be provided
Battery Capacity	200 AH or higher

TS-6.6 Antenna System

TS-6.6.1 VHF Antenna

The antenna system for the warning system shall be designed to meet the specific operating requirements within the frequency range of 136 to 174 MHz / NTC-approved frequencies.

The antenna shall be designed with reasonably high gain and directivity. High gain enables the antenna to effectively transmit and receive signals over long distances, while directivity helps reduce the reception of reflected signals from different angles. This improves signal quality and minimizes interference.

The Bidder shall install the antenna system at the designated locations within the warning system, including the offices involved in the operations of San Roque FFWS. Proper installation techniques shall be employed to ensure the stability and reliability of the antenna system.

The antenna shall be specifically designed for point-to-point communication, enabling reliable transmission and reception of signals between the warning stations and other relevant communication points.

The antenna system shall incorporate proper measures to protect cable connections. This includes utilizing appropriate cable shielding and ensuring secure and weather-resistant cable connections to maintain signal integrity and prevent signal loss or interference.

The materials used in constructing the antenna shall be durable and capable of withstanding outdoor and all-weather conditions. The antenna should resist corrosion, UV radiation, and other environmental factors to ensure long-term reliability and performance.

The antenna design should be optimized to reduce backside noise, receiver decentralization, and intermodulation interference. This ensures the antenna system maintains a high signal-to-noise ratio and minimizes unwanted signal distortion or interference, resulting in precise and reliable communication.

Technical Requirements

Requirements	Specifications
Standard Frequency Band	136 — 174 MHz
Bandwidth	8 — 10 MHz
Gain	≥ 3 dBi
VSWR	≤ 1.5
Pattern	Directional/Omnidirectional as applicable
Antenna Type	Weatherproof
Impedance	50-ohm

TS-6.6.2 Coaxial Cable and Connectors

The coaxial cable and connectors should be designed to operate within the specified frequency band of the warning system. They should have low signal loss and impedance matching characteristics to ensure efficient transmission of signals.

The coaxial cable and connectors should be constructed using materials resistant to galvanic corrosion, weathering, and fatigue. They should be capable of withstanding outdoor and harsh environmental conditions, ensuring long-term reliability and performance.

The coaxial cable should be provided with adequate support to prevent sagging or strain on the line, maintaining proper signal transmission and preventing damage. The mounting hardware, wall or roof-feed-through trays, and grounding kits should be included as necessary to ensure proper installation and grounding of the cable system.

The coaxial cable and connectors should be of good quality and comply with acceptable industry standards. They should be tested and certified to ensure safety, reliability, and adherence to performance specifications.

The Bidder may propose alternative options that meet or exceed the specified requirements.

Technical Requirements

Requirements	Specifications
Coaxial Cables	High-quality RG-8/U
Connector	PL-259 or as applicable
Impedance	50-ohm

TS-6.6.3 Coaxial Arrester / Surge Protectors

The coaxial arrester should have a very high impedance tailored explicitly for the operating frequencies of the radio equipment. This high impedance allows it to effectively divert and dissipate the energy from lightning surges, protecting the connected equipment.

The primary function of the coaxial arrester is to provide lightning surge protection. It should be designed to withstand and redirect the high-voltage surges caused by lightning strikes, preventing damage to the radio equipment. The arrester should be able to rapidly divert the surge energy to the ground, limiting its impact on the equipment.

In addition to surge protection, the coaxial arrester should also serve as a grounding device against induced lightning. It should provide a low-impedance path to the ground, effectively dissipating any induced electrical charges and minimizing the risk of equipment damage.

The coaxial arrester should be designed to operate within the frequency range of the radio equipment. It should offer low insertion loss and minimal

signal degradation, ensuring the integrity and performance of the radio signals passing through the coaxial cables.

Technical Requirements

Requirements	Specifications
Type	Feeder
Line Impedance	50 ohms
VSWR	1.2:1 or better
Frequency Range	136 — 174 MHz
Insertion Loss	0.5 dB or better

TS-6.7 Grounding System

The grounding system shall be designed to provide adequate surge protection for all equipment at the station. It should include suitable connections to ensure proper equipment grounding, minimizing the risk of damage from electrical surges or lightning strikes.

Grounding of the radio system and related equipment/devices shall adhere to relevant industry standards and regulations. The ground system installation shall employ proper grounding techniques to ensure low impedance and efficient dissipation of electrical currents. It should utilize appropriate grounding conductors, rods, plates, or other grounding components to establish a reliable connection to the earth. The acceptable minimum grounding resistance shall be maintained at 5 ohms or less.

All radio system components and related equipment/devices shall be adequately grounded per the manufacturer's guidelines and industry standards. This includes grounding antennas, coaxial cables, power supply units, surge protectors, and other interconnected equipment.

TS-6.8 Power Cables, Wiring, Tray/Rack, Parts and Accessories

The power cables or wirings, whether for indoor or outdoor installation, shall be selected based on their suitability for the application and electrical requirements. They should be capable of carrying the required voltage and current without excessive voltage drop or power losses. The tray/rack or mounting hardware may be introduced as necessary to ensure proper organization and support of the cables.

The materials used for the power cables or wiring shall be of appropriate quality and comply with industry standards. They should be designed to withstand the expected environmental conditions and provide reliable and safe power distribution. The cables and connectors shall be adequately insulated, resistant to wear and tear, and able to withstand the rated voltage and current. Power cables or wiring installation shall adhere to applicable electrical standards and regulations.

The Bidder shall provide a Regulated Power Supply specifically for the VHF Radio Transceiver Equipment at the master station. The power supply should meet the voltage and current requirements of the equipment, provide stable and regulated DC power, and incorporate necessary protection features.

Technical Requirements

Requirements	Specifications
Base Radio Power Supply	13.8 VDC 15 amperes or higher
Input Voltage	230 VAC 60Hz
Thermal and Overload Protection	Supported
Type	Switching with Battery Charging Auto-Revert Capability

TS-6.9 Related Parts, Cables, and Accessories

The selection of cables, whether for indoor or outdoor use, shall be based on their suitability for the specific application and environmental conditions.

Connectors used for cable terminations shall be compatible with the selected cable types. They should provide secure and reliable connections to ensure efficient signal transmission and minimize signal loss.

Layer switches and routers shall be selected based on the network requirements and capacity of the warning system. They should support the necessary protocols and ensure smooth data communication between the stations and the master control center.

Appropriate mounting hardware, such as racks, brackets, or enclosures, may be required to secure and organize the equipment and cables. The mounting hardware shall be good quality, durable, and capable of withstanding environmental conditions.

All cables, connectors, layer switches, routers, mounting hardware, and related parts and accessories shall meet industry standards for quality, performance, and safety. They should be tested, certified, and approved for their intended use to ensure reliability and compliance with regulations. The Bidder may propose alternative options that meet or exceed the specified requirements.

Technical Requirements

Requirements	Specifications
LAN Cable	CAT-5e STP (Shielded Twisted Pair)
Coaxial Cable	High-quality RG-8/U

TS-6.10 Configuration and Programming

TS-6.10.1 Operating System and Application System

The software should be based on an open system/platform, allowing easy modification, enhancement, and future expansion. It should support interface and protocol standards to ensure compatibility with other systems and devices.

The software should have stand-alone capability, allowing it to operate independently even if the software license expires or when updates are not immediately installed.

The software must be able to time stamp and log all relevant actions and processes for an audit trail. The software should also incorporate security measures, such as user-access levels and object permissions, to prevent unauthorized system use.

The software should support third-party hardware and software integration through open architecture standards and communication protocols. The operating system and application software used for the project must be licensed appropriately, complying with all legal requirements for software usage.

TS-6.10.2 Configuration and Programming

The application software for the warning station shall be installed at the San Roque FFWSDO office. It should be compatible with the Windows Operating System, ensuring seamless integration and operation within the existing infrastructure.

Each remote warning station shall have programs for warning operations and data collection. These programs should enable the receipt and transmission of data, detection, and communication of alarms with the control center, ensuring effective communication and coordination.

The programs installed in the remote warning stations should have built-in facilities to generate alarms, alerting the control center of various station statuses such as defects or malfunctions, solar panel connections, battery voltage, and opened doors. Visual and audible pop-up notifications should present these alarms to the operators.

The software should support comprehensive event logging, enabling recording system activities, warnings, and events. It should also facilitate data/record printing, allowing for the generation of reports and documentation. The software should provide storage and trending capabilities for historical data, enabling analysis and trend identification.

The Contractor shall provide sample screenshots of the proposed software interfaces as they appear on the monitor of the warning master station. These screenshots will visually represent the software's user interface, providing an overview of its functionality and design.

TS-6.10.3 Warning Operation Monitoring / Control Screen or Web User Interface

The interface design should include all necessary control buttons, indicators, and status displays relevant to the operation and management of the warning system. It should provide the user with a comprehensive overview of the system's functionality and enable efficient control and monitoring of the warning stations.

The development or configuration of the software interface must align with the specific requirements outlined in Item 6.2.1 of the warning system specification. The interface should meet the established standards and specifications to ensure seamless integration and compatibility with the overall system.

The operating screen or page of the supervisory computer terminal should present a user-friendly interface that displays the warning operation monitoring and control buttons, indicators, and status information as required by the end user. The layout and organization of the screen should be intuitive and facilitate easy navigation and understanding of the system's current state.

TS-6.10.4 Operating and Configuration Editor

The Bidder shall provide all necessary system and configuration editor software programs and the corresponding licenses as part of the equipment included in the Bid Price Schedule. The software package should consist of a complete set for each type of software required for the system. Additionally, the Bidder shall include instruction manuals that provide detailed guidance on the software's installation, configuration, and operation.

TS-6.11 Permits and Licenses

The Bidder is responsible for obtaining all necessary construction and work permits and licenses required for the successful implementation of the project. This includes securing permits and approvals from the National Telecommunication Commission (NTC) for acquiring, supplying, and operating radio equipment as required for the project. The Bidder shall bear the expenses associated with securing these permits and licenses.

To fulfill this requirement, the Bidder shall complete and submit all relevant application forms, network diagrams, layout plans, and drawings required by the NTC. As the project owner, NPC will provide the necessary signatures and support for the permit or license application process. The original copies of the obtained permits and licenses shall be handed over to NPC upon issuance.

TS-6.12 Spare Parts and Special Tools

The Bidder shall ensure the availability of spare parts for five (5) years from the manufacturer if NPC decides to purchase them. In the event of equipment end-of-life or reproduction, the Bidder shall provide one (1) month notice to NPC before the expected occurrence.

Furthermore, the Bidder shall provide all necessary equipment, spare parts, special testing devices, and special tools required for the installation, startup, operation, maintenance, and adjustment of the equipment and accessories. The cost of these items shall be included in the overall cost of the equipment as specified in the bid price schedule.

NPC shall provide a list of the equipment, spare parts, and special tools required, which will be included in the Technical Data Sheet. This list will serve as the basis for the bid price schedule, ensuring that all necessary items are accounted for.

As part of the unique tools, the Bidder shall utilize a calibrated power meter during testing and commissioning to ensure accurate and reliable measurements.

TS-6.13 Test and Commissioning

TS-6.13.1 Adjustment and Test Requirement

The Bidder shall be responsible for submitting a comprehensive test program for approval, detailing each test and adjustment to be performed, along with the corresponding schedule and workforce requirements. The test program shall outline the sequence of tests, specify the equipment to be used, provide operation procedures for the equipment, and include detailed instructions for conducting each test. The program shall also include design values, technical particulars, and other standard data necessary to evaluate the test results.

The Bidder shall provide experienced and skilled engineers and technicians with expertise in this field to perform the adjustments and tests. These personnel shall have the necessary knowledge and proficiency to ensure accurate and reliable testing, adhering to industry standards and specifications.

TS-6.13.2 Scope of Adjustment and Test

The adjustment process for the warning system involves two significant aspects: individual equipment adjustment at each site and overall adjustment of the entire system.

For individual equipment adjustment at each site, the following items shall be addressed:

a. Inspect mounting, cabling, and wiring quality to ensure proper installation.
b. Evaluation of electrical characteristics to verify the equipment's performance.

The overall adjustment of the whole system shall be carried out, focusing on:

a. Testing the overall operation of the system to ensure its functionality and coherence.
b. Verifying the proper functioning of each system function.

These adjustment activities are crucial to ensuring the optimal performance and reliability of the warning system, and experienced technicians and engineers shall conduct them to achieve accurate and satisfactory results.

TS-6.13.3 Details of Adjustment and Test

The adjustment process for the warning system involves thorough evaluations and tests to ensure the proper functioning and performance of each component. Performance tests shall assess the overall operation and functionality of the warning equipment, radio equipment and RTU, supervisory/terminal unit, power supply equipment, and printers. These tests

include verifying specific functions, evaluating electrical characteristics, and assessing web page/display performance.

The adjustment items for the warning system are as follows:

Warning Equipment

a. Visual inspection to check for any physical damage or defects.
b. Performance test to evaluate the overall operation and functionality of the equipment, which includes the following:
    i. Testing the overall operation
    ii. Testing specific functions
    iii. Testing electrical characteristics

Radio Equipment and RTU

a. Visual inspection to assess the condition of the equipment.
b. Performance test to evaluate the overall operation and functionality to include the following:
    i. Testing the overall operation
    ii. Testing specific functions
    iii. Testing electrical characteristics
c. Transmitter
    i. Rated Output
    ii. Transmitting Frequency

Supervisory/Terminal Unit

a. Visual inspection to check for any physical damage or defects.
b. Performance test to evaluate the overall operation and functionality to include the following:
    i. Testing the overall operation to ensure proper functioning.
    ii. Testing specific functions, including the web page/display and automatic updates.

Power Supply Equipment

a. Visual inspection to assess the condition of the equipment.
b. Performance test to evaluate its functionality.

Printer

a. Visual inspection to check for any physical damage or defects.
b. Performance test to evaluate the overall operation and functionality to include the following:
    i. Testing the overall operation
    ii. Testing specific functions

These adjustment items shall be carried out to ensure that each component of the warning system is properly functioning and meets the required standards.

TS-6.14 Work Assembly Tests

The Flood Warning System shall undergo thorough assembly and adjustment at the Bidder's workshop, followed by comprehensive shop tests and evaluations. All equipment components shall be marked for efficient field assembly. The tests conducted shall adhere to the latest applicable ANSI and IEC standards, ensuring compliance with industry requirements. NPC or its authorized representative shall have the opportunity to witness these tests unless explicitly waived in writing. The approval of NPC shall be obtained for the test equipment, methods, measurements, and computations used during the evaluation process. Equipment shall be installed once it has been released for delivery by NPC's authorized representative.

TS-6.14.1 Shop Test

The ANSI or equivalent IEC Standard shall conduct routine design, quality conformance tests, and other necessary tests. The Bidder shall be responsible for all preparations related to the tests, including providing the critical test apparatus and personnel. The Bidder shall notify NPC of the test date at least ten (10) days in advance.
The following tests, at a minimum, shall be performed on the equipment covered by the Specification at the Manufacturer's plant before shipment. NPC's authorized representative may witness the following equipment tests:

Transmitters and Receivers

1. RF Power Output
2. Transmitter RF Switch Functions
3. Radio Interconnect Functions / Features
4. Signaling

Co-Axial Cable

1. Attenuation
2. Dielectric Strength
3. Insulation Resistance

In addition, all the equipment functional operation shall be thoroughly checked to ensure all components work as intended. This includes testing radio equipment, repeaters, base stations, etc.

A physical inspection of the equipment shall ensure that all components are mechanically sound and meet the specified requirements. Particular attention shall be given to confirming compliance with any unique specifications outlined in the project's needs.

TS-6.14.2 Design/Routine/Type Tests Report

The Bidder must provide certified copies of the design, routine, and type test results for each type of equipment. The Bidder shall also furnish a detailed description of the tests conducted, including the test procedures followed and the corresponding results obtained.

The certified copies of the test results and detailed descriptions shall be submitted to NPC for review and verification.

TS-6.15 Training Requirements

The Bidder shall provide comprehensive training (on-site or in the designated facilities by the Bidder) to be attended by at least ten (10) NPC personnel: It shall include compliance with the participant's suggestion/recommendations for any system improvement before the Joint Final Inspection (JFI). The Bidder shall consider the training in the bid proposal and include it in the project cost.

The training program shall equip the participants with the necessary knowledge and skills to operate, configure, and maintain the system effectively. The training sessions shall be conducted clearly and concisely, utilizing appropriate training materials and hands-on exercises to enhance the participants' understanding and practical application of the system.

The training shall cover the project's operation, configuration, and maintenance to ensure that the participants, including hydrologists, engineers, and technicians, are proficient in operating and maintaining the system.

To facilitate the training, the Bidder shall provide highly qualified personnel, such as Telecom Engineers and IT Specialists/Programmers, with at least two (2) years of technical experience installing or maintaining systems similar to the project. The Bidder shall submit the trainers' corresponding Bio Data or Curriculum Vitae for NPC's evaluation.

The Bidder shall provide all necessary documentation and materials, including user manuals, technical guides, and training materials, to support the training program and enable continued learning and reference for the NPC personnel.

The training program shall encompass a combination of classroom instruction courses and hands-on training to ensure that NPC personnel are fully acquainted with the system and possess the necessary skills to manage, install, configure, test, commission, maintain, operate, and service the system.

The training shall provide an in-depth understanding of the warning system, including its overall structure, network diagram, and the components involved.

NPC personnel shall be trained on the step-by-step operating procedures for the entire system, including system startup, shutdown, routine operations, and emergency protocols.

The training program shall cover system configuration and programming, enabling NPC personnel to customize and adapt the system to meet specific requirements. This includes instructions on modifying system settings, adjusting parameters, and programming automated functions.

NPC personnel shall have the necessary knowledge and skills to troubleshoot and resolve hardware and software/firmware issues. The training shall include practical exercises and case studies to enhance problem-solving abilities.

TS-7.0 PREPARATORY AND INSTALLATION WORKS

A comprehensive survey and investigation shall be conducted to assess the site conditions and determine the optimal placement of the warning equipment. This includes conducting necessary surveys, measurements, and assessments to ensure the suitability of the installation location.

The Bidder shall transport and safely store all warning equipment and related materials. Proper handling, packaging, and storage practices shall be followed to protect the equipment from damage or deterioration during transit and storage.

All expenses associated with the preparatory works, including survey and investigation, transportation, and storage, shall be included in the contract price. The Bidder shall ensure that these preparatory works are conducted efficiently and by the project timeline.

TS-7.1 Survey and Investigation

Before the commencement of the installation works, a survey and investigation shall be conducted at each job site to obtain necessary information regarding road conditions, site conditions, and civil works conditions.

The survey and investigation shall be conducted by qualified personnel. They shall include a detailed assessment of the site's accessibility, terrain, ground conditions, and any existing infrastructure that may impact the installation.

TS-7.2 Transportation and Storage

Transportation shall mean carrying the warning equipment and materials from the Bidder's stockroom/stockyard to each job site. Transportation shall be conducted using suitable vehicles and equipment that can ensure the safe and secure transport of the equipment.

Storage shall mean keeping the warning equipment and materials in the stockroom/stockyard of the Bidder before the installation.

Storage equipment and materials, including spares shall be the responsibility of the Bidder until validated and accepted during the Joint Final Inspection, Testing and Commissioning Activities.

The transportation and storage activities shall be carried out with utmost care to ensure the integrity and functionality of the warning equipment and materials. Any costs associated with transportation and storage shall be included in the contract price.

TS-7.3 Installation Works

The Contractor shall carry out all installation works according to the technical specifications provided by NPC. The facility shall include the provision of labor, materials, equipment, and other necessary resources to complete the building per the specified requirements and industry standards.

The Contractor shall adhere to the manufacturer's recommendations and industry best practices while installing the equipment. The Contractor shall provide complete details of proper handling, transport, and storage, as well as installation procedures, testing, performance guarantees, and other relevant information for NPC's review and approval.

All documentation related to the installation works shall be prepared clearly and concisely, providing comprehensive instructions and guidelines.

The Contractor shall verify and check the control system hardware and software configuration to ensure compliance with the specified requirements. Any necessary logic configuration changes or additions shall be implemented per the project's needs. Tuning adjustments and optimization shall be performed to ensure the trouble-free operation of the system. The Contractor shall provide training to the operating personnel regarding the proper operation and maintenance of the equipment.

The Contractor shall possess experienced engineers or service technicians to carry out hardware troubleshooting and installation tasks. Any hardware-related issues shall be promptly identified, diagnosed, and resolved to ensure the smooth functioning of the equipment.

The Contractor shall execute the installation works with diligence, following approved procedures and industry standards, to ensure the successful implementation of the warning system. Experienced engineers or service technicians are essential to carry out the tasks effectively.

TS-7.3.1 Installation Requirements

The attached Drawings shall install the equipment and facilities, which shall serve as a reference for the installation process. The Bidder shall provide all necessary tools and consumable materials required for the installation at their own expense.

The system equipment shall be accompanied by necessary materials such as signal cables, power cables, junction boxes, power distribution boards, and other relevant components. All indoor materials shall be securely enclosed within equipment boxes for protection. The wiring materials shall have sufficient voltage and current capacity to meet the system's requirements. The signal cables shall be designed to withstand external noise, including induction interference, ensuring reliable signal transmission. Outdoor wires shall be of a waterproof type and capable of withstanding high temperatures caused by direct sunlight without compromising their functionality.

All equipment within the system shall be adequately grounded to ensure safety and efficient operation. The Bidder shall provide grounding wires, which shall be interconnected with other grounding wires to establish an effective grounding system.

The installation shall be carried out diligently, following the drawings and specifications. The Bidder provides the necessary materials and ensures proper equipment grounding.

TS-7.3.2 Method and Procedure

The installation method and procedure shall meet or exceed the following requirements:

a. Installation of Indoor Equipment

Using anchor bolts, floor-mounting equipment shall be securely anchored to the floor or table. Additional support, such as swing checks, may be provided to withstand vibrations. Wall-mounted type equipment shall be firmly anchored to the wall using anchor bolts.

b. Wiring

Interconnections between equipment shall be made using cable ladders, pits, conduits, or similar methods. Each cable shall be labeled with a tag indicating its destination. Exposed cable sections prone to damage shall be protected with ducts or similar means. Cables entering the station house from the outside should be properly waterproofed. Long-distance outdoor lines shall be equipped with lighting protection or other preventive measures.

c. Installation of Antenna:
The antenna shall be mounted at a specific height and direction to withstand specified wind loads. Galvanized coated fixtures shall be used to mount the antenna on an antenna pole. Outdoor coaxial cables shall be durable and able to withstand direct sunlight. A messenger wire or similar support shall be used for coaxial cables between the antenna pole and the station house. Coaxial connectors shall be carefully installed and waterproofed. Lightning arresters shall be installed on the coaxial cable to protect equipment from lightning.

d. Solar Cells

Solar cells shall be securely installed using anchor bolts or fixtures. Cables entering the station house shall be adequately waterproofed. Solar cells shall be positioned at an optimal angle and direction to maximize efficiency. The installation process shall adhere to these requirements, ensuring proper anchoring, wiring, antenna installation, and solar cell positioning. All necessary waterproofing, lightning protection, and equipment durability measures shall be implemented.

TS-8.0 ACCEPTANCE CRITERIA

The Bidder shall perform all inspections required at his own expense to ensure the adequacy of design, material, quality, and conformance of the supplied instruments and accessories to the requirements of the specifications and standards.

The equipment/component shall be subject to the Manufacturer's Standard Factory Tests before delivery.

A record shall be prepared carefully noting all eventual shortages, defects, or damages, signed by the Bidder and concurred by NPC. The Bidder shall immediately replace all shortages and damages reported at his own cost. They shall ensure the timely delivery of replacement without affecting the agreed-upon contract implementation schedule.

Acceptance certificate shall be issued only upon completion of the following:

a. Completion of all works as specified in the Scope of Works, including the successful test and commissioning of the project.
b. Submission of documents as specified hereto in Clause TS-9.0.
c. Completion of all punch list items.

If the equipment delivered fails to pass inspection, NPC may, at his judgment, direct the Bidder to make necessary replacements.

TS-8.1 Commissioning and Joint Final Inspection

The Contractor must submit a detailed site acceptance test parameter checklist, punch list, generated punch list (if applicable), system test parameters, and site cleanup checklist before conducting a Joint Final Inspection (JFI).

The tests on completion shall be conducted in the presence of NPC representatives from the Quality Assurance and Services Division (QASD) and the end user. The inspection shall include, but not be limited to, the following:

At each site:

a. Visual inspection of the quality of mounting, cabling, and wiring, and a physical inventory of system stations and equipment
b. Testing the system's performance and characteristics
c. Verification of electrical characteristics

Overall Test for the Whole System:

a. Overall Operation
b. Function

Any corrective works or deficiencies identified during the test shall be documented and included as punch list items. The punch list items shall be generated after the Joint Final Inspection (JFI) and must be addressed by the Contractor.

The completion of the project will be determined based on the date of acceptance of the compliance report, indicating that all punch list items have been satisfactorily resolved and the warning system is fully operational and compliant with the specifications.

TS-9.0 DRAWINGS AND DOCUMENTS TO BE SUBMITTED

The Bidder shall provide accurate and reliable data and information regarding the guaranteed performance data, predicted performance, interface requirements, and construction features of the equipment supplied. The Bidder will be solely responsible for the accuracy of such information and ensuring its compatibility with the overall performance requirements specified by NPC. All information submitted as part of the Proposal Data shall become an integral part of the contract data for the successful bidder.

a. To be submitted with the bid:

a.1 filled out Technical Data Sheets (TDS);

a.2 Original copy of the Manufacturer/Distributor Authorization to Bid and Certificate of Dealership or Reseller from the principal issued to the Bidder, directly addressed to the BAC-NPC, indicating therein the PR/Reference number to the following major components, such as:

a.2.1 Micro-controllers
a.2.2 Loudspeakers and amplifiers
a.2.3 VHF radios

Note: Authorization to bid and Certificate of Distributorship or Reseller from the Manufacturer shall be current and valid on the date of bid opening as advertised.

a.3 Certificate of Actual Site Inspection.

a.4 Generated software-based propagation test analysis report of all the warning station sites for expected radio communication coverage.

b. To be submitted during post-qualification:

b.1 Manufacturer's Brochures/ Catalogues/ Drawings which contain information/ data to support the Bidder's submitted and filled-out Technical Data Sheet;

b.2 Preliminary network diagrams and general assembly drawings;

b.2 Sample screenshot of management software,

b.3 Certificate of Satisfactory Performance and Successful Operation of installed flood forecasting or warning system from previous clients.

Note: Authorization to bid shall be current and valid for at least Six (6) months from the date of bid opening as advertised.

c. To be submitted before or upon delivery:

c.1 Certificate of Origin from the Manufacturer;

c.2 "Warranty Certificate" for at least three (3) years against factory defects/quality;

c.3 Three (3) sets of outline drawings of the equipment showing all critical dimensions and weights, including the following:

- Mounting dimensions and details and transport dimensions;
- Plans, elevation, and section views;
- Details of equipment cubicle and its contents;
- Control and power cable entrance openings at the cubicle;

- Details of terminals and grounding connections;
- Channel and support column outline drawing

c.4 Three (3) sets of Instruction manuals covering installation, operation, and maintenance;

- Three (3) sets of Network and Schematic/Circuit diagrams;
- Three (3) sets of Warning system application software backup installer disc or USB;
- System Test Parameters Checklist and System Test Reports duly signed by NPC's representative(s);
- Three (3) sets of detailed and as-built drawings were finally approved.

c.5 Duly signed Routine Test Results.

d. To be submitted after installation and commissioning;

d.1 As-built drawing/diagrams.

d.2 Field Test Reports duly signed and witnessed by the NPC representative; and

d.3 Three (3) sets of Operation and Maintenance Manual in the English language, including three (3) sets of CD;

Note: The date by which "as-built" drawings and operating and maintenance manuals are required within thirty (30) calendar days after contract completion.

All documents in **Clause TS-9.0 "Item (c)"** shall be submitted to the **Manager – Dams Management Department** for evaluation and approval before the issuance of the acceptance certificate.

TS-10.0 GUARANTEE

The Bidder shall submit a Warranty Certificate ***(At Least 3 Years)*** effective from the date of acceptance by NPC. Furthermore, as part of the warranty, the Bidder shall conduct quarterly system maintenance for the first ***Twelve (12) Months*** as part of actual training and technology transfer to the end user.

NPC shall promptly notify the Bidder in writing, via email or by cable confirmed in writing, of any defects for which a claim is made under this guarantee. The written notice from NPC shall provide a detailed description of the nature and extent of the defects.

The Bidder shall guarantee to complete the repair and replacement, upon receipt of notice from NPC, within ***Thirty (30) Calendar Days*** of the supplied instruments and accessories at his own expense against defects in design, quality, and materials, except in the case that such defects result from NPC's negligence or failure to perform correct maintenance and force majeure.

The Bidder shall provide a detailed Corrective Maintenance (CM) Report, which includes the findings and observations, actions taken to resolve the issue, and any recommendations for future preventive measures. The Bidder must guarantee that the unit will perform in the manner outlined in the manual and the Contract.

If system downtime lasts at least ***One (1) Month***, the downtime period shall be added to the original warranty period to account for the extended period of non-functionality.

After the warranty period lapses, provided that no defects are found and pending repair works, NPC shall release the warranty security/certificate.

TS-11.0 MEASUREMENT OF PAYMENT

Payment will be made at the contract unit price for each corresponding item in the Schedule of Requirements. Payment shall constitute the total compensation for the supply, delivery, installation, testing, and commissioning of the equipment/ component, including accessories.

SECTION VI - Technical Specifications

Part II – Technical Data Sheets

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SECTION VI - Technical Specifications

Part II – Technical Data Sheets

UPGRADING OF THE REMAINING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT

a. The Bidder shall complete this technical data sheet and submit the filled-up form with the technical proposal. The Bidder shall use continuation sheets as necessary for any additional information, keeping to the format shown herein or reproducing the same.

b. NPC reserves the right to reject Bids without proper and specific data and information as required herein.

c. The data required are technical features and characteristics of the Equipment/ component/material to be provided by the bidder. Bidder's proposal shall at least be equal or superior to the requirements specified by NPC.

Name of Bidder: _____

Signature of Bidder: _____

1.0 SAN ROQUE FFWSDO MASTER STATION

ITEM	DESCRIPTION	NPC REQUIREMENTS	BIDDER'S DATA/ COMPLIANCE
A. Master Supervisory and Control Equipment			
1.	Control Terminal / Supervisory Computer / Data Processing Equipment		
	a. Type	Application Server	
	b. CPU	Intel Core i7 2.8GHz or higher	
	c. Memory	16GB RAM or higher	
	d. Storage 1 SSD	512GB or higher	
	e. Storage 2 HDD	2TB HDD or higher	
	f. Optical Drive	Dual Layer R/RW or better	
	g. Operating System (OS)	a. Licensed Windows 10 Pro or better b. Licensed MS 2019 Office or better	
	h. Video Card (Plug-in)	8GB Video Graphics Memory or higher	
	i. Display	27" Full-HD with 1920 x 1080 resolution or better	
	j. Input/Output (I/O) Ports	USB ports, Audio ports, HDMI display port, RJ45 Ethernet	

Name of Bidder: _____

Signature of Bidder: _____

ITEM	DESCRIPTION	NPC REQUIREMENTS	BIDDER'S DATA/ COMPLIANCE
	k. Peripheral Devices	USB Mouse and Keyboard	
	l. Power Supply	220VAC 60Hz	
	m. Broadcast Sound Device	Omnidirectional microphone, external HD audio module with noise reduction. Customized steel/metal master station table with lockable CPU cabinet	
2.	Laptop Computer		
	a. Type	Laptop Computer	
	b. CPU	Intel core i7 2.4GHz or higher	
	c. Memory	16GB RAM or higher	
	d. Storage SSD	1TB or higher	
	e. Optical Drive, External	Dual Layer R/RW or better	
	f. Operating System	a. Licensed Windows 10 Pro or better b. Licensed MS Office 2019 or better	
	g. Video Card	4GB video graphics memory or higher	

Name of Bidder: _____

Signature of Bidder: _____

ITEM	DESCRIPTION	NPC REQUIREMENTS	BIDDER'S DATA/ COMPLIANCE
	h. Display	15.6" Full-HD or better	
	i. Input/Output (I/O) Ports	USB, audio, HDMI, Ethernet RJ45, WiFi, Bluetooth	
	j. Built-in Peripheral Devices	Touchpad-mouse, keyboard, webcam, mic, speaker system	
	k. Power Supply	220VAC 60Hz power adaptor	
	l. Application Software with Hardware Interface	Warning system software, Security utilities, VHF radio programming software	
3.	Customized Command Center Table		
	a. Steel/Metal Table	To Submit Design Drawing for NPC Approval	
B. COMMUNICATION LINK EQUIPMENT			
1.	VHF Radio Transceiver		
	a. Radio Operation	Conventional Digital Communication and Data Services	
	b. Frequency Range	136~174 MHz	
	c. Channel Access	FDMA/TDMA	

Name of Bidder: _____

Signature of Bidder: _____

ITEM	DESCRIPTION	NPC REQUIREMENTS	BIDDER'S DATA/ COMPLIANCE
	d. Common Air interference	NXDN	
	e. Channel Spacing	6.25/12.5 kHz, Digital	
	f. Operating Voltage	13.6V DC +/-15%	
	g. Frequency Stability	±0.5 ppm	
	h. Operating Temperature	Up to +60°C	
	i. Others	Programming Software and Cable	
	j. Transmitter	▪ Power Output: 25–50 Watts ▪ Spurious Emission: -73 dB ▪ FM Hum and Noise: 45 dB @ 25kHz, Analog ▪ Audio Distortion: 2%	
	k. Receiver	▪ Sensitivity, Digital: 0.25uV @ 12.5kHz, 3%BER ▪ Selectivity, Analog: 80 dB @ 25 kHz, Analog ▪ Spurious Rejection: 80 dB ▪ Audio Distortion: 2%	
C. PRINTER			
	a. Type	Multi-function (Copy, Scan, and Print)	
	b. Printing	Monochrome and Color	
	c. Input Voltage	220VAC 60Hz	

Name of Bidder: _____

Signature of Bidder: _____

ITEM	DESCRIPTION	NPC REQUIREMENTS	BIDDER'S DATA/ COMPLIANCE
	d. Interface	USB/ Network	
	e. Printing Speed	33ppm (Black)/ 15ppm (Color) or better	
	f. Ink Cartridge	Multi-tank	
	g. Spare Ink Cartridge	To provide	
D. VHF ANTENNA SYSTEM			
1.	VHF Antenna Design	Refer to TS-6.6.1	
2.	Coaxial Cable and Connectors	High-quality RG-8/U Coaxial Cables and PL-259 Connectors	
3.	Coaxial Arrester/Surge Protectors		
	a. Type	Feeder	
	b. Line Impedance	50 Ohms	
	c. VSWR	1.2:1 or better	
	d. Frequency Band	136 to 174 MHz	
	e. Insertion Loss	≤0.5Db or better	
4.	Parts, Cables, and Accessories	By Bidder	

Name of Bidder: _____

Signature of Bidder: _____

ITEM	DESCRIPTION	NPC REQUIREMENTS	BIDDER'S DATA/ COMPLIANCE
E. POWER SUPPLY SYSTEM			
1.	AC Connection and Distribution Board with AVR	To be Provided	
2.	Uninterrupted Power Supply for Computers		
	a. Nominal Input Voltage	220VAC 60Hz	
	b. Output Capacity	Not less than 1kVA	
	c. Back-up Time	9 minutes or more (full operation)	
3.	Grounding System	To provide	
4.	Power Cables, Wirings, Tray/Rack, Parts & Accessories	By Bidder	

2.0 WARNING STATIONS

A. Warning Station Equipment			
	General Features	High-Quality Digital Recording of Warning Tones and Messages, At least twenty (20) minutes of Fully Continuous Operation, Inclusive of Remote Operation Extension	

Name of Bidder: _____

Signature of Bidder: _____

1.	Microcomputer Controller / Remote Terminal Unit		
	a. Main Purpose	Site Command Controller	
	b. Recording Memory	At least 1GB	
	c. Sleep Mode	Supported	
	d. Input/Output (I/O) Ports	To provide	
	e. Programming	To perform	
2.	Amplifier		
	a. Type	Digital	
	b. Input Voltage	12-24 VDC	
	c. Output	≥ 500 Watts	
	d. Protection	By Bidder	
3.	Loudspeaker		
	a. Type	Electronic, Weatherproof	
	b. Input Voltage	12-24 VDC	
	c. Rated Output	125W, 109dB at 30m Omnidirectional or better	

Name of Bidder: _____

Signature of Bidder: _____

	d. Broadcast Range	350 meters for Live PA/Recorded Messages and 1 km for Siren/Alarm or better	
	e. Coverage	360° Flood Zone Coverage	
	f. Material	Aluminum Cast Alloy	
	g. Safety Feature	Whole Ground Potential Lightning Protection	
	h. Dummy Speakers	To be Provided	
4.	Warning Lights		
	a. Type	LED Bulb (Red, Yellow/Amber, Green)	
	b. Rated Output	At least 3W, Visible During Daytime	
	c. Input Voltage	12-24 VDC	
	d. Core Cabling	By Bidder	
5.	Outdoor LED Message Board		
	a. Type	Outdoor, Programmable LED Scrolling Message	
	b. LED's Color	Red / Yellow / White	
	c. Housing	All Weatherproof Material	
	d. Input Voltage	12-24 VDC	

Name of Bidder: _____

Signature of Bidder: _____

	e. Board Size	6" x 24"	
	f. Operation	Remote and On-site	
6.	Station Door Switch		
	a. Type	Magnetic Contact	
	b. Contact Rating	10 VA	
	c. Conformance	UL Standard	
7.	Equipment Box	To be Provided	
8.	Related Parts, Cables & Accessories	By Bidder	
B. Communication Link Equipment			
1.	VHF Transceiver	Refer to TS 6.4.8	
2.	VHF Repeater	Refer to TS 6.4.9	
C. VHF Antenna System			
1.	VHF Antenna	Refer to TS-6.6.1	
2.	Coaxial Cable and Connectors	Refer to TS-6.6.2	
3.	Coaxial Arrester/Surge Protectors	Refer to TS-6.6.3	

Name of Bidder: _____

Signature of Bidder: _____

4.	Related Parts, Cables & Accessories	By Bidder	
D. Power Supply System			
1.	Solar Panel	Monocrystalline Silicon Photovoltaic Cell, 100 Watts Capacity, 18-38 VDC Output	
2.	Charge Controller	Refer to TS-6.5.2	
3.	Grounding System, Power Cables, Wirings, Connectors and Conduits	By Bidder	
4.	Storage Battery	12V, Sealed Lead Acid, Maintenance Free, 200Ah Capacity	
E. Major Spare Parts and Special Tools			
1.	Microcomputer Controller/ Remote Terminal Unit	Refer to SOR	
2.	Amplifier	Refer to SOR	
3.	Loudspeaker	Refer to SOR	
4.	Warning Lights	Refer to SOR	

Name of Bidder: _____

Signature of Bidder: _____

5.	Outdoor LED Message Board	Refer to SOR	
6.	Station Door Switch	Refer to SOR	
7.	Charge Controller	Refer to SOR	
8.	VHF Radio Transceiver	Refer to SOR	
9.	Storage Battery	Refer to SOR	
10.	Other Special Tools	Refer to SOR	
F. PC Configuration and Programming			
1.	Configuration and Programming	Refer to TS-6.10	
G. NTC AND OTHER RELATED PERMITS AND LICENSES			
1.	Permits and Licenses	Included Three (3) Years for Radio Station License	
H. Experience Requirements			
1.	The manufacturer should have been in the business of manufacturing the equipment for not less than years:	5	
2.	The track record of successful operation of similar flood forecasting or warning systems installed	3	

Name of Bidder: _____

Signature of Bidder: _____

	must not be less than, years:		
3.	Telecom Engineers, IT Specialists/Programmers, and Technicians with High Qualifications for the Project Implementation and the Conduct of Training and Workshop	To be Provided	

Name of Bidder: _____

Signature of Bidder: _____

SECTION VII - SCHEDULE OF REQUIREMENTS

UPGRADING OF THE REMAINING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT

PR NO. HO-FFW24-003

ITEM NO.	DESCRIPTION	QTY.- UNIT	CODE	UNIT PRICE FOR GOODS AND RELATED SERVICES TO BE SUPPLIED AND DELIVERED						TOTAL PRICE
				Unit Price of Goods Delivered up to Philippine Port +(Phil. Peso)	Import Duties & other Levies Imposed by Phil. Govt. (Phil. Peso)	Value Added Tax and other Taxes Imposed by Phil. Govt. (Phil. Peso)	Local Transport from Port to Delivery Site <(Phil. Peso)	Labor (Installation, Testing and Commissioning) >(Phil. Peso)	Total Unit Price (E+F+G+H+I)	Local Currency (Phil. Peso) (K = J x C)
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
A.	SAN ROQUE FFWSDO MASTER STATION									
A.1	Master Supervisory and Control Equipment (Warning Station) as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following components: a. Control Terminal / Supervisory Computer / Data Processing Equipment (Industrial Type 24/7 Operation) b. System Configuration and Data Acquisition Equipment c. Customized Command Center Table (Steel/Metal)	1 Set								
A.2	Communication Link Equipment as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following component: a. VHF Radio Transceiver (including programming kit)	1 Set								
	b. VHF Radio Repeater (including programming kit)	1 Set								
A.3	Continous Ink Printer as specified in the Technical Specification and Technical Data Sheets	1 Unit								
A.4	VHF Antenna System as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following component: a. Directional / Omni-directional Antenna including parts, cables, and accessories required for the proper operation of the supplied equipment	1 Set								

SECTION VII - SCHEDULE OF REQUIREMENTS

UPGRADING OF THE REMAINING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT

PR NO. HO-FFW24-003

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(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
A.5	Power Supply System as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following components: a. AC Connection and Distribution Board with AVR b. Uninterrupted Power Supply c. Grounding System d. Power Cables, Wirings, Tray/Rack, Parts & Accessories	1 Lot								
B.	**WARNING STATIONS**									
B.1	Warning Station Equipment / System as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following components: a. Microcomputer Controller / Remote Terminal Unit b. Amplifier c. Loudspeakers d. Warning Lights e. Outdoor LED Message Board f. Station Door Switch g. Equipment Box h. All other parts and accessories required for the complete and proper operation of the supplied equipment	13 Units								
B.2	Communication Link Equipment as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following components: a. VHF Radio Transceiver (including programming kit)	13 Sets								

SECTION VII - SCHEDULE OF REQUIREMENTS

UPGRADING OF THE REMAINING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT

PR NO. HO-FFW24-003

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(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
B.3	VHF Antenna System as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following components: a. Directional/Omni-directional Antenna b. All other parts and accessories required for the complete and proper operation of the supplied equipment	14 Sets								
B.4	Power Supply System as specified in the Technical Specification and Technical Data Sheets complete but not limited to the following components: a. Solar Panel b. Charge Controller c. Grounding System, Power Cables, Wirings, Connectors and Conduits d. Storage Battery	14 Sets								
C.	**SPARE PARTS AND SPECIAL TOOLS**									
	a. Microcomputer Controller/Remote Terminal Unit	3 Set(s)								
	b. Amplifier	3 Set(s)								
	c. Loudspeakers	4 Set(s)								
	d. Warning Lights	3 Set(s)								
	e. Outdoor LED Message Board	3 Set(s)								
	f. Station Door Switch	3 Set(s)								
	g. Charge Controller	5 Set(s)								
	h. VHF Radio Tranceiver	3 Set(s)								
	i. Storage Battery	5 Set(s)								
	j. Other Special Tools	1 Lot								

SECTION VII - SCHEDULE OF REQUIREMENTS

UPGRADING OF THE REMAINING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT

PR NO. HO-FFW24-003

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(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
D.	PC CONFIGURATION AND PROGRAMMING	1 Lot								
E.	NTC AND OTHER RELATED PERMITS AND LICENSES	1 Lot								
F.	TRAINING OF NPC FFWSD PERSONNEL (Operation, Configuration, Maintenance, Troubleshooting & Repair)	1 Lot								
G.	OVERALL TESTING AND COMMISSIONING	1 Lot								
	--------- Nothing Follows ---------									

* Bidders shall enter a code representing the Country of Origin of all imported Equipment, Materials and Accessories

\+ Cost of equipment, freight, insurance, etc. up to Phil. port of entry

< Unit Price for Local Transportation, insurance and other local costs incidental to delivery of the goods from the Phil port of entry to final delivery site

> Unit Price for Local Transportation, insurance and other local costs incidental to delivery of the goods from local source to final delivery site

Code	Country of Origin	

Name of Bidder: _____

Signature of Bidder: _____

Note: Final delivery site of the equipment shall be at:

San Roque Dam Warning Stations

SECTION VIII

BIDDING FORMS

SECTION VIII – BIDDING FORMS

TABLE OF CONTENTS

Standard Form No: NPCSF-GOODS-01

Checklist of Technical & Financial Envelope Requirements for Bidders

A. THE 1ST ENVELOPE (TECHNICAL COMPONENT) SHALL CONTAIN THE FOLLOWING:

1. ELIGIBILITY DOCUMENTS

a. (CLASS A)

- PhilGEPs Certificate of Registration and Membership under Platinum Category (all pages) in accordance with Section 8.5.2 of the Revised IRR of RA. 9184;

  Note: The failure by the prospective bidder to update its Certificate with the current and updated Class "A" eligibility documents shall result in the automatic suspension of the validity of its Certificate until such time that all of the expired Class "A" eligibility documents has been updated

- Statement of all its ongoing government and private contracts if any, whether similar or not similar in nature and complexity to the contract to be bid *(NPCSF-GOODS-02)*

- The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, and whose value, adjusted to current prices using the Philippine Statistics Authority (PSA) consumer price index, must be at least 50% of the ABC *(NPCSF-GOODS-03)* complete with the following supporting documents:

  1. Certificate of Acceptance; or Certificate of Completion; or Official Receipt (O.R); or Sales Invoice

  (The Single Largest Completed Contract (SLCC) as declared by the bidder shall be verified and validated to ascertain such completed contract. Hence, bidders must ensure access to sites of such projects/equipment to NPC representatives for verification and validation purposes during post-qualification process.
  It shall be a ground for disqualification, if verification and validation cannot be conducted for reasons attributable to the Bidder.)

- Duly signed computation of its Net Financial Contracting Capacity (NFCC) at least equal to the ABC (NPCSF-GOODS-04) or a Committed Line of Credit (CLC) at least equal to ten percent (10%) of the ABC, issued by a Universal or Commercial Bank; If the Bidder opted to submit a Committed Line of Credit (CLC), the bidder must submit a granted credit line valid/effective at the date of bidding.

b. (CLASS B)

- For Joint Venture (if applicable), any of the following:

  - Valid Joint Venture Agreement *(NPCSF-GOODS-05)*

    OR

  - Notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA, if awarded the contract

- Certification from the relevant government office of their country stating that Filipinos are allowed to participate in their government procurement activities for the same item/product *(For foreign bidders claiming eligibility by reason of their country's extension of reciprocal rights to Filipinos)*

This Checklist of Requirements shall be provided to prospective suppliers/contractors including all forms. Suppliers/contractors are encouraged to consult this checklist before submitting their proposals on the deadline for the submission and receipt of offers.

Standard Form No: NPCSF-GOODS-01

2. *Technical Documents*

- Bid Security, any one of the following:
  - Bid Securing Declaration (NPCSF-GOODS-06c)

    OR
  - Cash or Cashier's/Manager's check issued by a Universal or Commercial Bank – *2% of ABC;*

    OR
  - Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: *(NPCSF-GOODS-06a) - 2% of ABC;*

    OR
  - Surety Bond callable upon demand issued by a reputable surety or insurance company *(NPCSF-GOODS-06b) - 5% of ABC, with*
    - Certification from the Insurance Commission as authorized company to issue surety
- Duly signed, completely filled-out and notarized Omnibus Sworn statement (Revised) (NPCSF-GOODS-07), complete with the following attachments:
  - For Sole Proprietorship:
    - Special Power of Attorney
  - For Partnership/Corporation/Cooperative/Joint Venture:
    - Document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable)
- Documents to be submitted with the Proposal as specified in Clause TS-9.0(a) of Section VI - Technical Specifications;
- Complete eligibility documents of the proposed subcontractor, if any

B. *THE 2ND ENVELOPE (FINANCIAL COMPONENT) SHALL CONTAIN THE FOLLOWING:*

- Duly signed Bid Letter indicating the total bid amount in accordance with the prescribed form *(NPCSF-GOODS-08)*
- Duly signed and completely filled-out Schedule of Requirement *(Section VII)* indicating the unit and total prices per item and the total amount in the prescribed Price Schedule form.
- For Domestic Bidder claiming for domestic preference:
  - Letter address to the BAC claiming for preference
  - Certification from DTI as Domestic Bidder in accordance with the prescribed forms provided

Standard Form No: NPCSF-GOODS-01

CONDITIONS:

1. *Each Bidder shall submit Two (2) copies of the first and second components of its Bid, marked Original and photocopy. Only the original copy will be read and considered for the bid. Any misplaced document outside of the Original copy will not be considered. The photocopy is ONLY FOR REFERENCE. NPC may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.*

2. *In the case of foreign bidders, the eligibility requirements under Class "A" Documents (except for Tax Clearance) may be substituted by the appropriate equivalent documents, if any, issued by the country of the foreign bidder concerned. The eligibility requirements or statements, the bids, and all other documents to be submitted to the BAC must be in English. If the eligibility requirements or statements, the bids, and all other documents submitted to the BAC are in foreign language other than English, it must be accompanied by a translation of the documents in English. The documents shall be translated by the relevant foreign government agency, the foreign government agency authorized to translate documents, or a registered translator in the foreign bidder's country; and shall be authenticated by the appropriate Philippine foreign service establishment/post or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines.*

   These documents shall be accompanied by a Sworn Statement in a form prescribed by the GPPB stating that the documents submitted are complete and authentic copies of the original, and all statements and information provided therein are true and correct. Upon receipt of the said documents, the PhilGEPS shall process the same in accordance with the guidelines on the Government of the Philippines – Official Merchants Registry (GoP-OMR).

3. *A Bidder not submitting bid for reason that his cost estimate is higher than the ABC, is required to submit his letter of non-participation/regret supported by corresponding detailed estimates. Failure to submit the two (2) documents shall be understood as acts that tend to defeat the purpose of public bidding without valid reason as stated under Section 69.1.(i) of the revised IRR of R.A. 9184.*

Standard Form Number: NPCSF-GOODS-02

List of All Ongoing Government and Private Contracts Including Contract Awarded But Not Yet Started

Business Name : _____
Business Address : _____

Name of Contract/ Project Cost	a. Owner's Name b. Address c. Telephone Nos.	Nature of Work	Bidder's Role		a. Date Awarded b. Date Started c. Date of Completion or Contract Duration/ Date of Delivery	Value of Outstanding Works / Undelivered Portion
			Description	%		
Government						
Private						
					Total Cost	

The bidder shall declare in this form all his on-going government and private contracts including contracts where the bidder (either as individual or as a Joint Venture) is a partner in a Joint Venture agreement other than his current joint venture where he is a partner. Non declaration will be a ground for disqualification of bid.

Note : This statement shall be supported with the following documents for all the contract(s) stated above which shall be submitted during Post-qualification:

1. Contract/Purchase Order and/or Notice of Award
2. Certification coming from the project owner/client that the performance is satisfactory as of the bidding date.

Submitted by : _____
(Printed Name & Signature)

Designation : _____
Date : _____

Standard Form Number: NPCSF-GOODS-03

The Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid

Business Name : _____
Business Address : _____

Name of Contract	a. Owner's Name b. Address c. Telephone Nos.	Nature of Work	Contractor's Role		a. Amount at Award b. Amount at Completion c. Duration	a. Date Awarded b. Contract Effectivity c. Date Completed
			Description	%		

Notes: 1. The bidder must state only one (1) Single Largest Completed Contract (SLCC) similar to the contract to be bid.
2. Supporting documents such as any of the following: Certificate of Acceptance; *or* Certificate of Completion; *or* Official Receipt (O.R); or Sales Invoice for the contract stated above shall be submitted during Bid Opening.

Submitted by : _____
(Printed Name & Signature)
Designation : _____
Date : _____

Standard Form Number: NPCSF-GOODS-04

NET FINANCIAL CONTRACTING CAPACITY (NFCC)

A. Summary of the Supplier's/Distributor's/Manufacturer's assets and liabilities on the basis of the income tax return and audited financial statement for the immediately preceding calendar year are:

		Year 20__
1.	Total Assets	
2.	Current Assets	
3.	Total Liabilities	
4.	Current Liabilities	
5.	Net Worth (1-3)	
6.	Net Working Capital (2-4)	

B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = [(Current assets minus current liabilities) x 15] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract for this Project.

NFCC = P _____

Herewith attached is certified true copy of the audited financial statement, stamped "RECEIVED" by the BIR or BIR authorized collecting agent for the immediately preceding calendar year.

Submitted by:

_____
Name of Supplier / Distributor / Manufacturer

_____
Signature of Authorized Representative

Date : _____

Standard Form Number: NPCSF-GOODS-05

JOINT VENTURE AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

That this JOINT VENTURE AGREEMENT is entered into by and between: _____, of legal age, *(civil status)*_____, authorized representative of _____ and a resident of _____.

- and –

_____, of legal age, *(civil status)* _____, authorized representative of _____ a resident of _____.

That both parties agree to join together their capital, manpower, equipment, and other resources and efforts to enable the Joint Venture to participate in the Bidding and Undertaking of the hereunder stated Contract of the **National Power Corporation.**

NAME OF PROJECT	**CONTRACT AMOUNT**
_____	_____

That the capital contribution of each member firm:

NAME OF FIRM	CAPITAL CONTRIBUTION
1.	₱
2.	₱

That both parties agree to be jointly and severally liable for their participation in the Bidding and Undertaking of the said contract.

That both parties agree that _____ and/or _____ shall be the Official Representative/s of the Joint Venture, and are granted full power and authority to do, execute and perform any and all acts necessary and/or to represent the Joint Venture in the Bidding and Undertaking of the said contract, as fully and effectively and the Joint Venture may do and if personally present with full power of substitution and revocation.

That this Joint Venture Agreement shall remain in effect only for the above stated Contract until terminated by both parties.

_____	_____
Name & Signature of Authorized Representative	*Name & Signature of Authorized Representative*
_____	_____
Official Designation	*Official Designation*
_____	_____
Name of Firm	*Name of Firm*

Witnesses

1. _____ 2. _____

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

Standard Form Number: NPCSF-GOODS-06a

FORM OF BID SECURITY (BANK GUARANTEE)

WHEREAS, *(Name of Bidder)*_____ (hereinafter called "the Bidder") has submitted his bid dated *(Date)*_____ for the *[name of project]* (hereinafter called "the Bid").

KNOW ALL MEN by these presents that We *(Name of Bank)*_____ of *(Name of Country)*_____ having our registered office at _____ (hereinafter called "the Bank" are bound unto National Power Corporation (hereinafter called "the Entity") in the sum of *[amount in words & figures as prescribed in the bidding documents]* for which payment well and truly to be made to the said Entity the Bank binds himself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20___.

THE CONDITIONS of this obligation are that:

1) if the Bidder withdraws his Bid during the period of bid validity specified in the Bidding Documents; or
2) if the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instructions to Bidder; or
3) if the Bidder, having determined as the LCB, fails or refuses to submit the required tax clearance, latest income and business tax returns and PhilGEPs registration certificate within the prescribed period; or
4) if the Bidder having been notified of the acceptance of his bid and award of contract to him by the Entity during the period of bid validity:
   a) fails or refuses to execute the Contract; or
   b) fails or refuses to submit the required valid JVA, if applicable; or
   c) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

we undertake to pay to the Entity up to the above amount upon receipt of his first written demand, without the Entity having to substantiate its demand, provided that in his demand the Entity will note that the amount claimed by it is due to the occurrence of any one or combination of the four (4) conditions stated above.

The Guarantee will remain in force up to 120 days after the opening of bids or as it may be extended by the Entity, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE OF THE BANK _____

WITNESS _____ SEAL _____

_____
(Signature, Name and Address)

Standard Form Number: NPCSF-GOODS-06b

FORM OF BID SECURITY (SURETY BOND)

BOND NO.: _____ DATE BOND EXECUTED: _____

By this bond, We (*Name of Bidder*) _____ (hereinafter called "the Principal") and (*Name of Surety*) _____ of (*Name of Country of Surety*) _____, authorized to transact business in the Philippines (hereinafter called "the Surety") are held and firmly bound unto National Power Corporation (hereinafter called "the Employer") as Obligee, in the sum of (*amount in words & figures as prescribed in the bidding documents*), callable on demand, for the payment of which sum, well and truly to be made, we, the said Principal and Surety bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

SEALED with our seals and dated this _____ day of _____ 20 _____

WHEREAS, the Principal has submitted a written Bid to the Employer dated the _____ day of _____ 20 _____, for the _____ (hereinafter called "the Bid").

NOW, THEREFORE, the conditions of this obligation are:

1) if the Bidder withdraws his Bid during the period of bid validity specified in the Bidding Documents; or
2) if the Bidder does not accept the correction of arithmetical errors of his bid price in accordance with the Instructions to Bidder; or
3) if the Bidder, having determined as the LCB, fails or refuses to submit the required tax clearance, latest income and business tax returns and PhilGEPs registration certificate within the prescribed period; or
4) if the Bidder having been notified of the acceptance of his bid and award of contract to him by the Entity during the period of bid validity:
    d) fails or refuses to execute the Contract; or
    e) fails or refuses to submit the required valid JVA, if applicable; or
    f) fails or refuses to furnish the Performance Security in accordance with the Instructions to Bidders;

then this obligation shall remain in full force and effect, otherwise it shall be null and void.

PROVIDED HOWEVER, that the Surety shall not be:

a) liable for a greater sum than the specified penalty of this bond, nor

b) liable for a greater sum that the difference between the amount of the said Principal's Bid and the amount of the Bid that is accepted by the Employer.

Standard Form Number: NPCSF-GOODS-06b
Page 2 of 2

This Surety executing this instrument hereby agrees that its obligation shall be valid for 120 calendar days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived.

PRINCIPAL _____	SURETY _____
SIGNATURE(S) _____	SIGNATURES(S) _____
NAME(S) AND TITLE(S) _____	NAME(S) _____
SEAL _____	SEAL _____

Standard Form No: NPCSF-GOODS-06c

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID-SECURING DECLARATION
ÚPGRADING OF THE REMAININING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT (PR NO. PR NO. HO-FFW24-003)

To: **National Power Corporation**
BIR Road cor. Quezon Ave.
Diliman, Quezon City

I/We[1], the undersigned, declare that:

1. *I/We* understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.
2. *I/We* accept that: (a) *I/we* will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) *I/we* will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the Procuring Entity for the commission of acts resulting to the enforcement of the Bid Securing Declaration under Sections 23.1 (b), 34.2, 40.1 and 69.1, except 69.1 (f) of the IRR of R.A. 9184; without prejudice to other legal action the government may undertake.
3. *I/We* understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
   (a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
   (b) *I am/we are* declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) *I/we* failed to timely file a request for reconsideration or (ii) *I/we* filed a waiver to avail of said right;
   (c) *I am/we are* declared as the bidder with the Lowest Calculated and Responsive Bid, and *I/we* have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, *I/we* have hereunto set my hand this ____ day of ____ 20____ at _____, Philippines.

_____
[Name and Signature of Bidder's Representative/ Authorized Signatory]
[Signatory's legal capacity]
Affiant

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

---

[1] *Select one and delete the other. Adopt same instruction for similar terms throughout the document.*

Standard Form No: NPCSF-GOODS-07

Omnibus Sworn Statement (Revised)

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. *[Select one, delete the other:]*

   [If a sole proprietorship:] I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];

   [If a partnership, corporation, cooperative, or joint venture:] I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];

2. *[Select one, delete the other:]*

   [If a sole proprietorship:] As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney;

   [If a partnership, corporation, cooperative, or joint venture:] I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)];

3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;

4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;

5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;

6. *[Select one, delete the rest:]*

   [If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

   [If a partnership or cooperative:] None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project

Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a corporation or joint venture:] None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and

8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:

   a. Carefully examining all of the Bidding Documents;

   b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;

   c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and

   d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.

9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Standard Form No: NPCSF-GOODS-08

BID LETTER

Date: _____

To: **THE PRESIDENT**
National Power Corporation
BIR Road cor. Quezon Ave.
Diliman, Quezon City

Gentlemen:

Having examined the Bidding Documents including Bid Bulletin Numbers *[insert numbers]*____, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to perform **ÚPGRADING OF THE REMAININING THIRTEEN (13) WARNING STATIONS OF SAN ROQUE DAM PROJECT (PR NO. HO-FFW24-003)** in conformity with the said Bidding Documents for the sum of *[total Bid amount in words and figures]*_____ or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to supply and deliver the goods and perform other services, if required within the contract duration and in accordance with the scope of the contract specified in the Schedule of Requirements and Technical Specifications.

If our Bid is accepted, we undertake to provide a performance security in the form, amounts, and within the times specified in the Bidding Documents.

We agree to abide by this Bid for the Bid Validity Period specified in Bid Documents and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements pursuant to the Bidding Documents.

We likewise certify/confirm that the undersigned, ***[for sole proprietorships, insert:*** as the owner and sole proprietor or authorized representative of *[Name of Bidder]*_____has the full power and authority to participate, submit the bid, and to sign and execute the ensuing contract, on the latter's behalf for the *[Name of Project]*_____ of the National Power Corporation ***[for partnerships, corporations, cooperatives, or joint ventures, insert:*** is granted full power and authority by the *[Name of Bidder]*_____ to participate, submit the bid, and to sign and execute the ensuing contract on the latter's behalf for *[Name of Project]*_____ of the National Power Corporation.

We acknowledge that failure to sign each and every page of this Bid Letter, including the attached Schedule of Requirements (Bid Price Schedule), shall be a ground for the rejection of our bid.

_____ _____
[name and signature of authorized signatory] *[in the capacity of]*

Duly authorized to sign Bid for and on behalf of _____
[name of bidder]

Bank Guarantee Form for Advance Payment

To: **THE PRESIDENT**
National Power Corporation
BIR Road cor. Quezon Ave.
Diliman, Quezon City

[name of Contract]

Gentlemen and/or Ladies:

In accordance with the Advance Payment Provision, of the General Conditions of Contract, *[name and address of Supplier]* (hereinafter called the "Supplier") shall deposit with the PROCURING ENTITY a bank guarantee to guarantee its proper and faithful performance under the said Clause of the Contract in an amount of *[amount of guarantee in figures and words]*.

We, the *[name of the universal/commercial bank]*, as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to the PROCURING ENTITY on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding *[amount of guarantee in figures and words]*.

We further agree that no change or addition to or other modification of the terms of the Contract to be performed thereunder or of any of the Contract documents which may be made between the PROCURING ENTITY and the Supplier, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition, or modification.

This guarantee shall remain valid and in full effect from the date the advance payment is received by the Supplier under the Contract and until the Goods are accepted by the PROCURING ENTITY.

Yours truly,

Signature and seal of the Guarantors

_____
[name of bank or financial institution]

_____
[address]

_____
[date]

CERTIFICATION AS A DOMESTIC BIDDER

This is to certify that based on the records of this office, *(Name of Bidder)* _____ is duly registered with the DTI on _____.

This further certifies that the articles forming part of the product of *(Name of Bidder)* _____, which are/is *(Specify)* _____ are substantially composed of articles, materials, or supplies grown, produced or manufactured in the Philippines. (Please encircle the applicable description/s).

This certification is issued upon the request of *(Name of Person/Entity)* _____ in connection with his intention to participate in the bidding for the *(Name of Project)* _____ of the National Power Corporation (NPC).

Given this __ day of _____20__ at _____, Philippines

_____
Name

_____
Position

_____
Department of Trade & Industry