The Bhagirathi Co-operative Milk Producers' Union Limited

(A Govt. of West Bengal Project)

BU/MDO/RIDFXXIX/1977 Date: 06.03.2026

The Bhagirathi Cooperative Milk Producers' Union Limited invites e-Reverse Auction in two bid system for supply, installation, testing and commissioning of a Reverse Osmosis (RO) water treatment plant of capacity 5 KLPH including pretreatment, dosing systems, RO system, CIP system, interconnecting piping, electricals and instrumentation as per specification terms and conditions mentioned hereunder in two bid system:

Scope of work

The plant shall be designed to treat raw water and produce permeate water suitable for process/industrial use as per the specified treated water quality.

- Design & engineering of complete RO system
- Supply of all equipment & accessories
- Fabrication of RO skid
- Installation & erection at site
- Electrical wiring from panel to equipment
- Chemical charging & membrane loading
- Testing & commissioning
- Performance demonstration
- One month trial run (if required)
- Operator training

Estimated Cost: Rs 20,00,000/-

EMD: Rs 40,000/-

Quantity: 01 Unit

Delivery: Supply, installation & commissioning of the ordered item with all accessories must be completed within 60 days from the date of order.

Technical Specifications: As per the **Annexure -A**

Bid Validity: 365 Days

Documents to be furnished by the bidder for Technical Bidding:

1. Company Documents like MOA, AOA/Partnership/Proprietorship deed, Trade License/Certificate of Enlistment.
2. Company declaration of a minimum of 3 years of work experience in supply, installation and commissioning of at least 5 no(s) capacity 5 KLPH or above Reverse Osmosis (RO) water treatment plant to any industry. (Work Orders or Completion Certificates in support of same must be provided)

3. Minimum Turnover of Rs 1 crore in execution of similar nature of work. Audited Balance Sheet of previous three consecutive financial years (22-23, 23-24 and 24-25). Companies with decreasing turnover shall not be considered.
4. Income Tax Return of previous three consecutive financial years (22-23, 23-24 and 24-25).
5. PAN CARD
6. GSTIN (GST Registration Certificate)
7. Brochure or Technical Specification Sheet & Compliance Sheet as per Annexure-B
8. Declaration as per ANNEXURE-C

General Terms and Conditions:

1. **Price** to be quoted shall consist of cost of Equipment along with 2 years of onsite comprehensive maintenance, inclusive of all taxes and levies, transit insurance, freight, packing, loading, unloading and any other incidental charges. Kindly note that all cost should be taken into consideration while quoting the rates. During 2 years of comprehensive maintenance, the cost of consumables shall be borne by the Milk Union.
2. Inspection of materials may be undertaken at the supplier's premises whenever necessary by the Tendering Authority/ any officer authorized by the undersigned.
3. **Inspection of Equipment:**
   - **After delivery:** The Milk Union shall conduct joint inspection with the supplier's Engineer to verify whether goods have been delivered in good condition or not. Materials not delivered in good condition shall be rejected outright. Materials received in good condition shall be accepted and further procedure for release of payment shall be initiated.
   - **After Installation:** Delivered Equipment shall be installed by the supplier's Engineer. The Installation Calibration and commissioning have to be done by the service Engineer to full satisfaction of the In-charge Dairy.
4. Bidder should have local arrangement (within West Bengal) for prompt after sale services of the installed unit as and when required within warranty period free of cost. The service must be attended within 24 hours the receipt of the information.
5. **Delivery/Supply Schedule:** Within 60 (thirty) days from the date placement of Purchase Order cum AOC. Supply, Installation & Commissioning of the ordered item with all accessories must be completed. Trial – run of the whole unit will be done in presence of Milk Union's authorized personnel. Trial run report shall be submitted duly signed by the authorized personnel. Comprehensive hand on training must be imparted to the lab personnel which includes, SOPs, Preventive and Corrective maintenance, Dos and don'ts, calibration etc.

6. **Insurance:** The supplier shall make arrangements for insuring the goods against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery. If the equipment's is not commissioned and handed over to The Bhagirathi Cooperative Milk Producers Union Ltd. within specified period, the insurance will have to be extended by the supplier at their cost till the successful installation, testing, commissioning and handing over of the goods to The Bhagirathi Co-operative Milk Producers' Union Ltd.

7. **Place of Delivery, Installation and Commissioning:** The office of The Bhagirathi Cooperative Milk Producers' Union Ltd. Feeder Dairy, Panchantala, Berhampore, Murshidabad, Pin742101, West Bengal.

8. **Payment:** Payment shall be released in 3 phases in NEFT/RTGS to the Bank Account of the supplier after submission of 3 copies of invoice along with documents mentioned in Documentation clause which are as follows:

   a) **First Phase:** 70% payment shall be released after 30 days of receipt of the materials (all the components) as per the technical specification in good condition certified by the Concerned Official and approved by the Competent Authority. EMD shall also be released after receipt of an intimation in writing from the supplier.

   b) **Second Phase:** 20% payment shall be released after 1 month of successful installation, commissioning and trial run of all the units supplied duly certified by the Concerned In-Charge and approved by the Tender Inviting Authority.

   c) Third Phase: 10 % payment shall be released after submission of equivalent amount of performance bank guarantee valid for 1 year from the date of commissioning. Performance bank guarantee shall be forfeited if the performance of the installed unit is found unsatisfactory.

9. **Penal Measure:** Time being the essence of the contract failure to supply the materials within due time or delay in installation and commissioning of the materials shall invite penalty as follows:

   a) Liquidated damages of 0.5% per day subject to maximum of 10% of the total cost of the materials shall be charged if goods are not delivered in time and the amount will be deducted from the EMD and bills submitted by the supplier.

   b) For violation of any terms and conditions of the contract the Bhagirathi Milk Union reserves the right to cancel the contract without assigning any reason thereof. On termination of contract the EMD will be forfeited, and the resultant loss shall be recovered from the company. The subsequent company will be blacklisted for 3 years.

10. **EMD:** EMD of the lowest bidder shall be refunded after receipt of material in good condition in a month. EMD of unsuccessful bidders shall be refunded as per NCDFI e-Market norms. EMD shall not carry interest.

11. **Mode of transportation:** Mode of transportation for the supply of the goods to Milk Union will be arranged by the bidder.

12. Materials dispatched from the bidder until or unless reaches the Milk Union is the sole responsibility for the supplier. The Milk Union will not be responsible for any damage in the transit, loading or unloading and no claim in this regard will be entertained.

13. **Documentation:** Supplier to submit the following documents at the time of delivery:
    a) Commercial/E-Invoice.
    b) E-Way bill
    c) Packing List
    d) Equipment Brochure comprising of Technical Specifications
    e) Operating Manual & User Manual (Easy to follow)
    f) Cleaning & Maintenance Manual
    g) Warranty Card if any
    h) Acceptance Copy of Purchase Order/Award of Contract.

    (Failure to submit any of the above documents shall lead to non-release of payment)

14. **Maintenance of Equipment:**
    - **Preventive maintenance:** should be done by the supplier's Service Engineer to maintain health of the equipment. Quarterly preventive maintenance must be done by the supplier for 2 years i.e. 4 preventive maintenance per year. Cost of consumables for 2 years must be borne by the suppliers

    - **Corrective maintenance:** Corrective maintenance must be done on call within 24 hours when the unit is down and not in operation or not providing the required output. The supplier must keep all spares in custody for speedy remedy. Equipment down must be brought into operation within 24 hours.

    - Cost involving preventive and corrective maintenance for 2 years should be taken into consideration while quoting the rates.

15. **Warranty:** All the spares and components of the RO Plant must be warranted by the supplier for a period of 2 years from the date of commissioning. All genuine and original spares and equipment as per specified brand must be supplied. In case no brand is mentioned material must be supplied in compliance to BIS Standard. If any component is found to be non-functional due to any manufacturing defect or because of poor workmanship the component must be immediately replaced with a new component by the supplier within 24 hours. In case the replacement is likely to take a longer period then the supplier must arrange for a substitute within 24 hours.

16. **Warranty Extension:** The warranty of equipment would be extended if equipment remains down during the warranty period, for more than period mentioned below:
    - If equipment has been down for more than 10 days in a year, warranty would be extended by one Month.
    - If equipment has been down for more than 30 days due to malfunctioning of the any part supplied by bidder or want of spares/ consumable, warranty would be extended by one Year.
    - If equipment has been down for more than one year due to malfunctioning of the any part supplied by bidder or want of spares/ consumable, warranty would be extended by 2 (Two) Years.

17. **Service Issues & Resolution:** Issues arising due to calibration, operation and maintenance must be effectively handled by the supplier. The Equipment should be operational at all times. If at any point of time if the equipment is not in operation due to maintenance issues, requirement of spares, consumables already informed to the supplier after 24 hours, a penalty of Rs. 2000/- per day shall be imposed by the Milk Union on the supplier subjected to a maximum of 10% of the total cost and it shall be realised from the Performance Guarantee deposited to the Milk Union till the day the machine is brought back to operation. It is also be noted that warranty shall be extended as per warranty extension clause.

18. **Standards:** The Goods supplied under this Agreement shall conform to the standards mentioned in the Technical Specifications and when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods' country of origin.

19. **Registration of Goods:** If required under the Applicable Law, goods supplied under the Agreement shall be registered for use in India.

20. **Patent Rights:** The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.

21. **Packing:** The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Purchase Order.

22. **Termination for Default:** The Purchaser, without prejudice to any other remedy for breach of the Agreement, by written notice of default sent to the Supplier, may terminate this Agreement in whole or in part:
    - If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Purchase Order, or within any extension thereof granted by the Purchaser; or
    - If the Goods do not meet the Technical Specifications or registration requirement (if any) stated in the Agreement; or

- If the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, in competing for or in executing the Agreement; or
- If the Supplier fails to perform any other obligation(s) under the Agreement.

23. **Termination for Insolvency:** The Purchaser may at any time terminate the Agreement by giving written notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent.

24. **Termination for Convenience:** The Purchaser, by written notice sent to the Supplier, may terminate the Agreement or the Purchase Order, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Agreement or Purchase Order is terminated, and the date upon which such termination becomes effective. The Goods that are already supplied before the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the terms and prices described in the Agreement and the Purchaser order.

25. **Dispute Resolution:** Any dispute arising out of the Agreement, which cannot be amicably settled between the parties, shall be referred to adjudication/arbitration in accordance with the Arbitration and Conciliation Act of 1996 of India. The venue of adjudication/arbitration shall be Kolkata. The language of arbitration shall be English.

26. **Applicable Law:** The Agreement shall be interpreted in accordance with the laws of Union of India.

27. **Force Majeure:** If, at any time during the subsistence of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war or hostility, act of public enemy, civil commotion, sabotage, fire, floods, explosion, epidemics, quarantine restriction, strikers lockout or Act of God (hereinafter referred to as events) neither party shall have any claim for damages against other in respect of such non-performance or delay in performance.

28. The undersigned reserves the right to accept or reject any tenders and to cancel the entire tender process without assigning any reason whatsoever.

Sd/-
Managing Director
The Bhagirathi Cooperative
Milk Producers' Union Limited

The Bhagirathi Co-operative Milk Producers' Union Limited

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Annexure -A

Technical Specification of Reverse Osmosis (RO) water treatment plant of capacity 5,000 liters per hour

Reverse Osmosis (RO) water treatment plant of capacity 5,000 liters per hour including pretreatment, dosing systems, RO system, CIP system, interconnecting piping, electricals and instrumentation. Plant shall be designed to treat raw water and produce permeate water suitable for process/industrial use as per the specified treated water quality.

1. RAW WATER REPORT:

The present water quality is as follows:

Parameter	Unit	Value
pH	–	**7.32**
TDS	mg/L	**700**
Turbidity	NTU	**<1**
Alkalinity	ppm	**282**
Iron	mg/L	**0.001 (light positive)**
Hardness	ppm	**600**

The bidder should visit the Dairy and get water samples, tested before quoting this bid.

2.TREATED WATER QUALITY (RO PERMEATE)

The treated water quality at the outlet of the treatment system should be as follows:

Parameter	Unit	Value
pH	–	6.8 – 7.2
TDS	mg/L	< 10
Turbidity	NTU	NIL
Alkalinity	ppm	<200
Iron	mg/L	NIL
Hardness	ppm	0-10
Color	Colour unit	Nil
Bacteria	ppm	Nil

3.DESIGN PARAMETERS FOR RO SYSTEM

- RO Capacity (Permeate): **5 m^3/hr**
- RO Feed Flow: **10 m^3/hr**
- RO Recovery: **50%**
- Feed TDS: **1000 ppm (Max)**
- Permeate TDS: **< 10 ppm**
- Operating Pressure: **8–10 bar**

- Flux Design: **15–18 LMH**
- Membrane Type: **8" Brackish Water, Low Fouling**
- Salt Rejection: **≥ 99.6%**

4.SCOPE OF SUPPLY

A. PRE-FILTRATION SYSTEM – 10 M³/HR

i. **Filter Feed Pump**
- Capacity: 10 m³/hr
- Head: 25–30 m
- MOC: CI casing with SS316 impeller
- Motor: IE2 efficiency

ii. **Pressure Sand Filter (PSF)**
- Capacity: 10 m³/hr
- MOC: MS epoxy / rubber lined
- Filter Media: Graded quartz sand
- Complete with frontal piping & valves

iii. **Activated Carbon Filter (ACF)**
- Capacity: 10 m³/hr
- MOC: MS epoxy / rubber lined
- Media: Activated carbon + support media
- Complete with frontal piping & valves

iv. **Micron Cartridge Filter**
- Rating: 5 micron
- Cartridge Size: 20" / 30"
- Housing MOC: UPVC / SS

B. REVERSE OSMOSIS PLANT – 5 KLPH

i. **RO Dosing Systems**
- Antiscalant dosing system
- SMBS dosing system (Dechlorination)
- pH correction (HCl / Caustic)
- Dosing pumps with LDPE tanks

ii. **RO High Pressure Pump**
- Flow: 10 m³/hr
- Pressure: Up to 12 bar
- MOC: SS304
- With VFD

v. **RO Membrane Housing**
- Size: 8" x 40"

- MOC: SS304 / FRP
- Pressure rating: ≥ 300 psi

vi. **RO Membranes**
- Quantity: 6–8 Nos. (Design dependent)
- Type: Brackish water, low fouling
- Salt rejection: ≥ 99.6%

vii. **RO Skid**
- SS frame
- Complete internal piping & valves

viii. **Instrumentation**
- Roto flow meters (Feed / Permeate / Reject)
- Pressure gauges (SS wetted parts)
- pH meter
- Conductivity meter (Online permeate)

ix. **Electrical Control Panel**
- MCC / PLC based with ammeter, voltmeter, indicator, on off switch, float sensor for automation
- Interlocks & protections
- IP54 enclosure

x. **Interconnecting Piping & Valves**
- MOC: UPVC / SS304
- Suitable for operating pressure

C. CIP SYSTEM (CLEAN-IN-PLACE)

i. CIP Tank – 1000 Liters (HDPE)
ii. CIP Pump – 10 m^3/hr, SS304
iii. Cartridge Filter – 5 micron
iv. Complete piping & hoses

5.BATTERY LIMIT / CUSTOMER SCOPE

i. Raw water availability at required pressure
ii. Power supply: 415V ±10%, 50Hz
iii. Civil foundation & RO room
iv. Drain & reject water disposal
v. External laboratory testing (if required)

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Approved Makes:

Sl. No.	Description	Make
1.	Filter Feed Motor	Crompton / Kirloskar / Siemens/ABB
2.	Filter Feed pump	Jonson / Grundfos / Kirloskar
3.	Pressure sand filter	Forum / ION Exchange/ Thermax / Equivalent
4.	Activated Carbon Filter	Forum / ION Exchange/ Thermax / Equivalent
5.	Micron Filter	Forum / ION Exchange/ Thermax/ Polyfilt
6.	Antiscalent Dosing pump - I	Milton Roy / Equivalent
7.	SMBS Dosing pump - I	Milton Roy/ Equivalent
8.	HCL Dosing pump - I	Milton Roy/ Equivalent
9.	RO – I High pressure pump	Grundfos / Nanfang / Kirloskar
10.	RO Membrane housing	Pentair/ Equivalent
11.	RO Membrane	Toray / Equivalent
12.	RO skid	Forum Equivalent
13.	PH Correction dosing system (Caustic)	Milton Roy / Equivalent
14.	Roto Flowmeters	Flow star / Equivalent
15.	PH meter	Forbes Marshal / Equivalent
16.	Conductivity meter	Forbes Marshal / Equivalent
17.	Pressure gauges	Wika / Equivalent
18.	Pressure switches – High / Low	Danfos / Equivalent
19.	CIP Pump	Grundfos / Kirloskar
20.	Cartridge filter	Forum / Polyfilt

Sd/-
Managing Director
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Annexure-B

This Sheet is to be filled up by the bidder in their letter head and uploaded in Technical Bid Folder

Sl. No.	Description	Approved Make of Milk Union	Make to be supplied by the bidder
1.	Filter Feed Motor	Crompton / Kirloskar / Siemens/ABB	To be filled up by the bidder
2.	Filter Feed pump	Jonson / Grundfos / Kirloskar	To be filled up by the bidder
3.	Pressure sand filter	Forum / ION Exchange/ Thermax / Equivalent	To be filled up by the bidder
4.	Activated Carbon Filter	Forum / ION Exchange/ Thermax / Equivalent	To be filled up by the bidder
5.	Micron Filter	Forum / ION Exchange/ Thermax/ Polyfilt	To be filled up by the bidder
6.	Antiscalent Dosing pump - I	Milton Roy / Equivalent	To be filled up by the bidder
7.	SMBS Dosing pump - I	Milton Roy/ Equivalent	To be filled up by the bidder
8.	HCL Dosing pump - I	Milton Roy/ Equivalent	To be filled up by the bidder
9.	RO – I High pressure pump	Grundfos / Nanfang / Kirloskar	To be filled up by the bidder
10.	RO Membrane housing	Pentair/ Equivalent	To be filled up by the bidder
11.	RO Membrane	Toray / Equivalent	To be filled up by the bidder
12.	RO skid	Forum Equivalent	To be filled up by the bidder
13.	PH Correction dosing system (Caustic)	Milton Roy / Equivalent	To be filled up by the bidder
14.	Roto Flowmeters	Flow star / Equivalent	To be filled up by the bidder
15.	PH meter	Forbes Marshal / Equivalent	To be filled up by the bidder
16.	Conductivity meter	Forbes Marshal / Equivalent	To be filled up by the bidder
17.	Pressure gauges	Wika / Equivalent	To be filled up by the bidder
18.	Pressure switches – High / Low	Danfos / Equivalent	To be filled up by the bidder
19.	CIP Pump	Grundfos / Kirloskar	To be filled up by the bidder
20.	Cartridge filter	Forum / Polyfilt	To be filled up by the bidder

Signature of the Bidder with date & seal

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Annexure-C
DECLARATION

(To be furnished in the letterhead of the bidder duly signed and sealed)

1. I/We the undersigned solemnly declare that all the statements made in the documents, records etc., attached with this application are true and correct to the best of my/our knowledge.

2. I/We the undersigned do hereby certify that neither my/our firm/company nor any of its constituent partners have abandoned any work/works of similar nature and magnitude in India, in the past.

3. I/We the undersigned do hereby certify that any of the contracts awarded to me/us has not been terminated rescinded, due to breach of contract on my/our part in the past.

4. I/We the undersigned do hereby certify that we have not been blacklisted by NDDB or any dairy industry or any other industry in the past.

5. I/We the undersigned do hereby certify that the materials to be supplied against the Contract shall be original and genuine. We further declare that no refurbished component or spare shall be supplied.

6. I/We the undersigned authorize (s) and request any bank / person / firm / corporation / Government Departments to furnish pertinent information deemed necessary and requested by The Bhagirathi Cooperative Milk Producers' Union Ltd. to verify the statement made by me/us or to assess my/our competence and general reputation.

7. I/We the undersigned, understand(s) that further qualifying information / clarifications on the statement made by me / us may be requested by The Bhagirathi Cooperative Milk Producers' Union Ltd and agree(s) to furnish such information/clarification within SEVEN Days from the date of receipt of such request from The Bhagirathi Cooperative Milk Producers' Union Ltd.

8. **I/We agreed to abide by the terms and conditions of the Reverse Auction Notice.**

Dated Signature of Applicant with Seal:
To be signed by the officer authorized by the Firm/Company to sign on behalf, the Firm/Company with company's seal)
Note: In case of sole proprietary concern, affidavit should be signed only by the sole proprietor.

(Title of the Officer)

(Title of the firm/Company)

(Date)