



NAME OF ITEM / WORK	:	<b>DESIGN, SUPPLY, ERECTION, INSTALLATION, TESTING AND COMMISSIONING MEMBRANE FILTRATION TECHNOLOGY BASED REVERSE OSMOSIS (RO) PLANT FOR MILK CONCENTRATION FOR VARIOUS METRO / DCMPU DAIRIES</b>
TENDER NOTICE REFERENCE NO	:	3192/Proj.3/2022, Dated:04.04.2022

## **PART - I TECHNICAL BID**

THE TAMILNADU COOPERATIVE  
MILK PRODUCERS' FEDERATION LTD  
CHENNAI 600 035

Tender document issued to M/s. _____ Cost of Tender document remitted under receipt No. _____ Date _____ (or) Tender downloaded from website on _____ at free of cost
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The Dy. General Manager (Engg.).

## TENDER INFORMATION

1. Name and address of the Purchaser	:	The Dy. General Manager (Engg.), Tamilnadu Cooperative Milk Producers' Federation Ltd., Head Office, Aavin Illam, 3-A, Pasumpon Muthuramalinganar Salai, Nandanam, Chennai – 600 035. E-Mail: aavindgmeng@yahoo.co.in
2. Name and address of the User	:	The General Manager, Trichy / Coimbatore DCMPU Ltd., The Dy. General Manager (Prodn.), Sholinganallur / Ambattur Dairies
3. Name of the Item / Work	:	Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies
4. Tender Reference Number	:	3192/Proj.3/2022
5. Tender Estimated Value	:	Rs.589.00 Lakhs
6. Earnest Money Deposit (EMD)	:	Rs.5,89,000.00
7. Cost of Tender Document	:	Rs.2,000/- + 18% GST and Rs.100/- extra by post either by cash or demand draft in favour of TCMPF Ltd. payable at Chennai drawn from any Indian Nationalized Bank / Scheduled Commercial Bank. <b>Alternatively,</b> Tender documents can also be downloaded from the designated website at free of cost (i.e.) <a href="http://www.tenders.tn.gov.in">www.tenders.tn.gov.in</a> and <a href="http://www.aavinmilk.com">www.aavinmilk.com</a> for submission of tender <b>by post (or) courier / <a href="http://www.tntenders.gov.in">www.tntenders.gov.in</a> for e-submission.</b>
8. Sale of tender documents	:	<b>From:</b> 07.04.2022 To 11.05.2022 <b>Time:</b> 11.00 AM To 3.00 PM
9. Date of Pre-Bid meeting	:	<b>Date:</b> 20.04.2022 <b>Time:</b> 11.30 AM
10. Last date and time for submission of the two part tender – both technical and commercial bids.	:	<b>Date:</b> 12.05.2022 <b>Time:</b> 2.00 PM
11. Date and time of opening of Part I Technical Bid Document.	:	<b>Date:</b> 12.05.2022 <b>Time:</b> 2.15 PM
12. Date and time of opening of Part II Financial Bid	:	Financial Bid will be normally opened within 60 days from the date of opening of Part I pre qualifications-technical bid. The date of opening of Financial Bid will be informed to the eligible tenderers who are found and declared as qualified as per Part I technical bid.
13. Place of Sale of Tender Documents, Pre- Bid meeting & Part I Technical Bid and Part II Price Bid opening	:	The Dy. General Manager (Engg.), Tamilnadu Cooperative Milk Producers' Federation Ltd., Head Office, Aavin Illam, 3-A, Pasumpon Muthuramalinganar Salai, Nandanam, Chennai – 600 035.

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## **1.0. TECHNICAL BID – CHECK LIST**

### **PREAMBLE OF TENDER:-**

**1.1.** The Dy. General Manager (Engg.), Head Office, TCMPF Ltd. invites Bids by way of **E-Submission / OFF Line** from eligible bidders on behalf of The General Manager / DGM (Prodn.), Sholinganallur, Ambattur, Trichy and Coimbatore Dairies by two cover system for Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies.

### **1.2. BIDDER TO FILL IN THE CHECK LIST GIVEN BELOW:**

**(State YES / NO for each item)**

Kindly ensure compliance of the under-mentioned requirements, as per Tender Terms and Conditions.

1.3. The tender is offered for:

S.N.	Name of the work	Remarks
1	Whether two covers for each item have been sealed separately as "Technical bid" & "Commercial bid" (whichever is applicable) and both the covers enclosed in a common overall envelope duly superscribed as "Tender for Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies	Yes / No
2.	Whether the EMD amount as detailed below is enclosed in the technical bid	
Item No.	Name	EMD amount
1.	Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies	Rs.5,89,000.00
3.	If so, whether D.D. or Bank Guarantee is attached with the Tender offer - Part I / Tech.Bid	Yes / No
4.	If so, Details of D.D. or Bank Guarantee No. date, Bank on which drawn etc. may be furnished D.D./BG No(s)..... Dated..... For Rs..... Bank Name and Branch ..... in favour of The Managing Director, TCMPF Ltd. payable at Chennai For E-submission the Earnest Money Deposit specified above may also be paid through online in TN e-Procurement Portal and scanned copy of proof for payment of EMD (ie. e-payment receipt) has to be uploaded.	Yes/No
5.	If EMD exemption is sought for, whether necessary documentary proof/evidence such as EM Part – II as per	Yes / No

SIGNATURE OF THE TENDERER WITH SEAL

	MSMED Act 2006 for SSI Certificate / Udyog Aadhar enclosed in the technical bid for tenderers from the state and if from outside the state (Tamilnadu) whether NSIC certificate enclosed	
6.	Whether details of infrastructural facilities such as equipment / man-power / financial statement (FY - 2018-19, 2019-20 & 2020-21) details etc., are enclosed.	Yes/No
7.	Whether details of past experience (i.e) Purchase order copy(s) for same capacity (or) above of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration	Yes/No
8.	Whether satisfactory performance certificate from client(s) for the above such supply with features mentioned in the technical specification tendered are enclosed	Yes/No
9.	If so, whether necessary supportive documents such as attested copies of Supply Order / Work order, delivery challans, enclosed.	Yes / No
10.	Whether copies of attested GST Registration certificates enclosed	Yes / No
11.	Whether copy of attested PAN card enclosed	Yes / No
12.	Whether the Minutes of Pre-Bid meeting duly signed and sealed has been enclosed along with Technical Bid Part-I	Yes/No
13.	Whether all the pages in the tender documents - Part I (Tech. Bid) and Part II (Commercial Bid) have been duly signed by authorized signatory	Yes / No
14.	Whether the Commercial bid is filled in detail in the prescribed format for break-up, equipment-wise and for abstract	Yes/No
15.	Whether these two sealed covers for Part - I "Technical Bid" and Part II - "Commercial Bid" - put in a larger cover duly superscribed, addressed and wax sealed at appropriate places.	Yes/No

**Note:** Please ensure that all the relevant boxes are marked YES / NO against each column.

**Important Note:** Bidders must ensure that all the required documents indicated in the tender document are submitted without fail. Bids received without supporting documents for the various requirements mentioned in the tender document are liable to be rejected at the initial stage itself.

SIGNATURE OF THE TENDERER WITH SEAL

## **2. TWO PART TENDER APPLICATION**

### **TECHNICAL (PRE-QUALIFICATION) BID & PRICE BID APPLICATION**

**From**

M/s.

**To**

The Dy. General Manager (Engg.),  
TCMPF Ltd.,  
Head Office, Aavin Illam, 3-A,  
Pasumpon Muthuramalinganar Salai,  
Nandanam, Chennai – 600 035.

Sir,

Sub: Two Part tender – [Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration for Various Metro / DCMPU Dairies](#) – Submission of Documents – Regarding.

<><><>

Having examined the two part tender documents consisting of Part I technical bid pertaining to pre-qualification and part II commercial bid with price quote, I/We hereby submit all the necessary documents and relevant information for bidding the above mentioned tender.

The application is made by me/us on behalf of ..... in the capacity of ..... duly authorized to submit this two part tender offer.

Necessary evidence admissible in law in respect of authority assigned to me on behalf of the bidding firm is herewith attached.

I submit the documents herewith taking into consideration of all the instructions, terms and conditions in the detailed two part tender notice.

I/We understand that The Dy. General Manager (Engg.), TCMPF Ltd., Chennai reserves the right to reject any tender offer fully or partly without assigning any reasons thereof.

I/We hereby agree to hold the tender offer valid for acceptance for a period of 120 days from the date of opening of Part – I – Technical bid.

Signature of the Applicant  
Including title capacity

(NAME IN BLOCK LETTERS)

Enclosures:

1. Evidence of authority to sign
2. Latest brochures if any
3. Part I pre-qualification – Technical bid in separate sealed cover
4. Part II commercial bid with price quote in separate sealed cover.

### **3. INSTRUCTIONS TO THE TENDERERS**

This two part tender document consists of:

Part I – Technical Bid for Pre-Qualifying

Part II – Commercial bid for price-quote schedule.

- 3.1 Read all the terms and conditions of the two part tender before to start filling up.
- 3.2 The tenderers are to submit the **original set** of the two part tender (both Part – I – Technical Bid and Part II Commercial Bid) duly filled in, attach necessary documents and are advised to retain the duplicate set of documents for records.
- 3.3 The part I – Technical Bid for Pre-qualification consisting of pages.....and the Part II – Commercial bid for price-quote schedule consisting of pages..... should be submitted in two different covers duly superscribed as “Tender for the **Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies**” and again put both the sealed technical bid cover and commercial bid cover in a larger wax sealed cover duly superscribed as “**Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies**” and addressed to “The Dy. General Manager (Engg.), TCMPF Ltd., Head Office, Aavin Illam, 3-A, Pasumpon Muthuramalinganar Salai, Nandanam, Chennai – 600035.” either in person or by post so as to reach on or before the time and date specified. Tenders received after the specified date and time shall be summarily rejected.
- 3.4 The tenderer shall submit tenders in person or by post or courier or by electronic submission through the designated website [www.tntenders.gov.in](http://www.tntenders.gov.in) as provided in the TTTT Rule 18 (1) and 18 (3).
- 3.5 a).If the envelope is not sealed and super-scribed as instructed, no responsibility will be assumed for any misplacement of tender or premature opening of the envelope or parcel.  
b). Telegraphic / FAX Tenders will not be accepted.  
c). E-Tendering facility is available for this tender.
- 3.6 The quantities mentioned in the tender document are approximate. The tender accepting authority shall be permitted to vary the quantities finally ordered and execute the work through the contractor to the extent of 25% (Twenty five percent) either way of the requirements.

I agree to abide by the above instructions

SIGNATURE OF THE TENDERER

- 3.7 **Go through the check slip given and ensure compliance of the terms and conditions.**
- 3.8 The tenderer is specifically informed that all the pages in both Part I – Technical Bid and part II – Commercial Bid should be signed at the bottom of each page without any omission by the authorized signatory with name and seal of the firm.
- 3.9 The signatory of the tender should indicate his/their status in which he/they have signed and submit necessary documentary proof admissible in law in respect of such authority assigned to him/them by the firm.
- 3.10 If the Qualification application is made by a FIRM in partnership, it shall be signed by all the partners of the firm with their full names and current address or by a partner authorized by the firm (either as per Articles of the Deed of Partnership / by power of attorney)- for signing in Tenders, Agreements etc. In which case, certified copy of the registered deed of Partnership along with the current address of all the partners and a certified photocopy of the Registered Power of Attorney issued in favour of the Signatory, should be produced.
- 3.11 If the Qualification Application is made by a Limited Company or a Limited Corporation, it shall be signed by a duly authorized person holding the Power of attorney for signing the application, in which case, the certified copy of the power of attorney shall accompany the qualification application. Such limited company or corporation shall also furnish satisfactory evidence of its' existence along with the Qualification schedule.
- 3.12 **The tenderer who are downloading the document from the web site are instructed to check the web site for corrigendum after the date of pre-bid meeting, for any amendments (pre-bid – minutes) (if any issued) They are instructed to down load the above amendments and enclose it along with the technical bid document duly authenticating while submitting without fail. Failure to submit the pre-bid minutes will lead to rejection of the tender offer.**
- 3.13 The tenderer shall provide Raw material test certificates, Manufacturer Test Certificates and also arrange to provide instrument for identification of material to conform as per technical specification during the inspection.
- 3.14 Detailed evaluation done on the basis of the Documents / Records / Evidences / Certificates produced by the Applicant in the Technical Bid.

I agree to abide by the above instructions

SIGNATURE OF THE TENDERER



#### **4.0.GENERAL TERMS & CONDITIONS**

- 4.1. Tender under sealed **two part tender system** (i.e.) Technical Bid (Prequalification) & Price Bid (item rate tenders) are invited for and on behalf of The General Manager / DGM (Prodn.), Sholinganallur, Ambattur, Trichy and Coimbatore Dairies by The Dy. General Manager (Engg.), Head Office, TCMPF Ltd. for the Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies
- 4.2
- 4.2.1. The tenderer should be a sole bidder / lead bidder or consortium partner (maximum two consortium partner is allowed )
- 4.2.2. The term tenderer / bidder in this document refers to sole bidder / lead bidder or consortium partner
- 4.2.3. The tenderer should be manufacturer / supplier of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration
- 4.2.4. The tenderer should have previous experience in having designed, supplied, installed and commissioned same capacity (or) above of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration, in India either to any cooperative institution or reputed dairies / firms.
- 4.2.5. The tenderer should have designed, supplied, installed and commissioned same capacity (or) above of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration, for which tender called for, and enclose copies of purchase order / supply order within a period of 5 years.
- 4.2.6. The performance certificate for above such supply for which Purchase Order / Supply order furnished as per 4.2.5 from the reputed purchaser shall be enclosed in the technical bid part – I. The performance certificate received from purchaser / client should be of within a period of 3 years.
- 4.2.7. The Tenderer should have minimum experience of 5 Years in the manufacturing, design, supply, installation and commission of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration. Copies of Registration of firms with list of activities/GST registration certificate etc. should be enclosed as supporting document.

Noted and agreed to the above

SIGNATURE OF THE TENDERER

- 4.2.8.If the tenderer is an authorized dealer / supplier of original equipment manufacturer (OEM), the tenderer shall furnish the authorization letter from the original equipment manufacturer (OEM) for supply of [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#). The original equipment manufacturer (OEM) can authorize only one dealer / supplier
- 4.2.9.If the tenderer is an authorized dealer / supplier for [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#) then the experience of the manufacturer for supply of [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#), their performance shall be taken for evaluation of technical bids, even if the supply has been made either by the manufacturer directly or through other agencies.
- 4.3.
- 4.3.1 PART I TECHNICAL BID, wherein the pre-qualification, based on various factors such as supply, capacity etc., suitability and eligibility of the tenderer will be evaluated, considered and decided prior to opening of commercial Bids under PART II of the tender.
- 4.3.2.THE PART I technical bid shall be opened on **12.05.2022 at 02.15 PM**. in the presence of the tenderers or their authorized representative who opt to be present during the opening.
- 4.4.
- 4.4.1. The PART II Commercial Bid of the tenderers who do not satisfy any/all the terms and conditions specifically so mentioned under PART I technical, shall not be considered and shall not be opened as non responsive.
- 4.4.2.PART II Commercial Bid, wherein the rates tendered by those who qualify for and are selected as per the terms and conditions prescribed in PART I TECHNICAL BID only will be considered and decided for the award of the contract for the [Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration for Various Metro / DCMPU Dairies](#)
- 4.5. The Part II commercial bids shall normally be opened within 60 days from the date of opening of the Part I pre-qualification/ technical bid in the presence of tenderers or their authorized representatives who opt to be present. The date of such opening of commercial bid will be informed separately to those who qualify in the PART I technical bid.
- 4.6. The tenderer is specifically informed that all the pages in both Part I – Technical Bid and Part II – Commercial Bid should be signed at the bottom
- [Noted and agreed to the above](#)

SIGNATURE OF THE TENDERER

of each page without any omission by the authorized signatory with name and seal of the firm.

4.7. The tender forms are not transferable or assignable.

4.8. The signatory of the tender should indicate his/their status in which he/they have signed and submit necessary documentary proof admissible in law in respect of such authority assigned to him/them by the firm. If the tender opening day is declared as a holiday, the tenders shall be received and opened immediately on the next working day at the same time and place.

#### **4.9 E.M.D. PAYABLE:**

4.9.1 Tender must be accompanied with the prescribed amount of EMD along with tender, **if e-tender, the EMD DD should be dropped in the tender box before closure time or may be paid through online in TN e-Procurement Portal and scanned copy of proof for payment of EMD (ie. e-payment receipt) has to be uploaded**

4.9.2 EMD Payable is as detailed below:-

<b>Sl. No.</b>	<b>Name of equipment</b>	<b>Qty.</b>	<b>EMD amount</b>
1	Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies	1 Job	<b>Rs.5,89,000.00</b>

The EMD amount to be drawn by means of the **Demand Draft or it shall be submitted by means of Bank Guarantee for the period of 12 months and extendable as and when required** from any Indian Nationalised Bank or Scheduled Bank drawn in favour of the "Managing Director, TCMPF Limited," Payable at Chennai. **IT SHALL BE ENCLOSED WITH THE PART I TECHNICAL BID ONLY.** For e-Submission the EMD amount paid through online in the **TN e-Procurement Portal. No other form of remittance shall be accepted.**

**4.9.3.** SSI Units claiming exemption from the payment of EMD,

1. Shall enclose a copy of EM Part II as per MSMED Act 2006 for SSI Certificate obtained from the General Manager, District Industries Centre / Udyog Aadhar, in respect of items manufactured by them for which tenders have been called for alone will be granted exemption from payment of EMD.

Noted and agreed to the above

SIGNATURE OF THE TENDERER

2. In respect of SSI units located outside the state (Tamilnadu), such of these units registered with NSIC in respect of items manufactured by them for which tenders have been called for alone will be granted exemption from payment of EMD.

**4.9.4. Tenders not accompanied with Demand Draft or Bank Guarantee or Online Payment towards the prescribed EMD or the relevant documentary proof for the exemption thereon shall be summarily rejected.**

4.9.5. The EMD remitted by the tenderer shall be forfeited in full.

- 1). If the tenderer submit fresh offer / revises offer in case of any omission subsequently after opening.
- 2). If withdraws his tender or backs at before the expiry of validity period or after acceptance.
- 3). If revises any of the terms quoted during validity period.

**4.9.6. MODIFICATION AND WITHDRAWAL OF BIDS**

4.9.6.1. No Tenderer shall be allowed to withdraw the tenders after submitting the tender.

4.9.6.2 A Tenderer may submit a modified Tender before the last date for receipt of tender: Provided that where more than one Tender is submitted by the same Tenderer, the lowest eligible financial tender shall be considered for evaluation.

4.9.6.3 Each bidder's modification notice shall be prepared, sealed, marked and delivered with the outer and inner envelopes additionally marked MODIFICATION as appropriate.

4.9.6.4 No bid may be modified after the deadline for submission of Bids.

4.9.7 Bidders shall submit offers that comply with the requirements of the bidding documents, as indicated in the technical specifications.  
**"Alternatives will not be considered".**

4.9.8 Communication to the unsuccessful Bidders will be sent after the communication sent to the successful Bidder. Within 90 (Ninety) days from the date of the receipt of refund vouchers duly stamped and signed from the unsuccessful Bidder, refund of Earnest Money Deposit will be made.

**4.10. PAN/GST REGISTRATION/CLEARANCE CERTIFICATE:**

4.10.1. Tenderers shall furnish attested Photostat copies of valid GST Registration Certificates along with the tender technical bid Part-I.

Noted and agreed to the above

SIGNATURE OF THE TENDERER

4.10.2.Tenderers shall furnish attested Photostat copy of PAN Registration Certificates along with the tender technical bid Part-I.

4.10.3.Tenderers have to furnish the latest valid S.T. Clearance Certificate before issuance of final orders.

**4.11. ENCLOSURES:** The tenderer should submit the following documents **duly attested by Notary Public** along with the Part – I technical bid.

- 1). Purchase orders as supportive documents to show the past supply having supplied to any of the reputed dairies / firm(s) /coop(s) in India.
- 2). Satisfactory performance certificate from client(s) for the above equipments tendered.
- 3). If the tenderer is an authorized suppliers of a manufacturer, the tenderer shall furnish the authorization letter from the manufacturer for supply of [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#)
- 4). Photostat copies of valid GST Registration Certificate, PAN Certificate.
- 5). Infrastructure facilities – Capacity of Firm / Supplier:-
  - (i). Structure and Organization with details of Technical Personnel etc. – Annexure – A
  - (ii). Financial Capability Statement – Annexure – B
  - (iii). Building, Plant and Equipments
  - (iv). Details of Abandonment of work Litigation / debarring done – Annexure – C
  - (v). Affidavit – Annexure – D
  - (vi). Credit Facilities – Bank Certificate – Annexure – E

#### **4.12. SECURITY DEPOSIT**

The successful tenderers would be required to sign an agreement and furnish a Security Deposit of 5% of the order value, drawn by means of Demand Draft or it shall be submitted by means of Bank Guarantee for the period of 18 months and extendable as and when required from any Indian Nationalised Bank or Scheduled Bank drawn in favour of "Managing Director, TCMPF Ltd" payable at Chennai within 15 days of notifying them. The EMD already paid along with tender shall be adjusted against SD to be paid by the successful tenderer.

No exemption will be given from payment of Security deposit under any circumstances as per TNTT Act and the same should be remitted by above means. Any other form of remittance will not be accepted.

[Noted and agreed to the above](#)

SIGNATURE OF THE TENDERER

4.12.1. The security deposit will be refunded only after the expiry of 6 months from the date of satisfactory completion of the contract satisfactorily complying to the specification of the equipment to take care of the workmanship of the agency.

#### **4.13. AGREEMENT:**

The successful tenderer has to execute an agreement on Rs.100/- non-judicial stamp paper incorporating the terms and conditions of the contract and the specification within 15 days from the date of intimation of the acceptance of the tender. In case of default of either of the conditions (i.e) remitting the security deposit or execution of the agreement within the time allowed, the EMD paid is likely to be forfeited by the Federation.

4.13.1. If the contractor fails to execute the contract satisfactorily at the tendered rate, the security deposit will be forfeited by the Federation.

4.13.2. If the Federation incurs any loss / additional expenditure due to the negligence of the contractor in connection with the work during the period of contract, the same shall be recovered together with all charges and expenses from the contractor.

4.13.3. The breakages or damages, if any, caused by the contractor to the property of the Federation, the cost will be recovered from the contractor.

4.13.4. **RATES AND PRICE:** This is a fixed price contract. Price adjustment clause (to account for raise or fall in the money value / statutory taxes during the contract period) is not operatable for this contract. However any variation in the statutory levies and Taxes by State Government / Central Government shall be effected on the end price to the benefit of either the contractor or Federation as the case it may be.

4.13.5. No interest shall be paid on Earnest Money Deposit/Security Deposit.

4.13.6. The Agreement in Rs.100/- non-judicial stamp paper shall be signed and returned within 15 days of receipt of the Design, Supply, Erection, Installation, Testing and Commissioning order along with the D.D. for Security Deposit.

#### **4.14. DELIVERY SCHEDULE:-**

4.14.1. Supply : 3 - 4 months from the date of receipt of purchase order (or) 1 month from the readiness of site

[Noted and agreed to the above](#)

SIGNATURE OF THE TENDERER

whichever is later

4.14.2. Erection, Installation, Testing and Commissioning : 1 – 2 months from the readiness of site (or) receipt of Materials at site whichever is later.

**4.15. PAYMENT TERMS:**

**4.15.1. SUPPLY:**

a). If the single order of any successful tenderers is over Rs.1 crore., an advance payment of 10% of the basic value of the order will be considered against irrevocable bank guarantee for a period till completion of entire supply of [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration Machinery / Equipments](#) and such advance shall be recovered with interest applicable at the time of recovery from the bills payable at the time of release of 70% basic price + taxes and other charges.

**(OR)**

70% of basic price + taxes and other charges shall be released on receipt of the [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration Machinery/Equipments wise](#) in good condition at site.

b). The remaining 30% payment shall be released after the Erection and satisfactory commissioning of the [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration Machinery/Equipments wise](#) at site.

**(OR)**

If the site is not ready due to unavoidable circumstances for carrying out the Erection, Installation, Testing and Commissioning of the equipments within 3 months period, then the balance 30% payment on supply will be considered for release on submission of irrevocable Bank Guarantee for a value equal to 30% of supply order value, for one year and extendable for another one more year with an agreement on a non-judicial stamp paper to a value of Rs.100/- (Rupees hundred only) for execution of project subsequently without altering the Erection, Installation, Testing and Commissioning charges.

**4.15.2. ERECTION, INSTALLATION, TESTING AND COMMISSIONING:**

a). 70% of the Erection, Installation, Testing and Commissioning charges shall be released on satisfactory completion of the Erection, Installation, Testing

[Noted and agreed to the above](#)

SIGNATURE OF THE TENDERER

and Commissioning of the [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#)

- b). Balance 30% of Erection, Installation, Testing and Commissioning charges shall be released after 3 months from the date of satisfactory commissioning and performance of the [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#).

**N.B: NO OTHER TERMS OF PAYMENT WILL BE ENTERTAINED.**

**PENALTY CLAUSE:**

4.15.3. If the tenderer / Contractor fails in his due performance of the contract within the time fixed in the schedule accompanying the order or extension of time granted:-

- (a) Liquidated damages will be levied at 1% per month for the number of days that the supply / work has been delayed for the contract value less than Rs.50,00,000/- (Rupees fifty lakhs) as below subject to:-

(i). The Liquidated Damages be imposed on the value of undelivered / delayed supply of materials / machineries instead of total value of contract, if the tender is for the Design, Supply, Erection, Installation, Testing and Commissioning of two or more number of machineries and where the materials / machineries can be put into use separately.

**(OR)**

(ii). The Liquidated Damages be imposed on the total value of the contract for delayed supply / completion of material / work as per the milestone fixed in the tender (i.e) turnkey job inclusive of Civil work, supply of Mechanical/Electrical item, Erection etc., since the machineries partly supplied could not be put into operation and affect the functioning of system and other accessories as per plan.

- (b). The Liquidated Damages be imposed for the delayed supply / Erection, Installation, Testing and Commissioning at 0.5% per month, if the contract value is more than Rs.50.00 Lakhs (Rupees fifty lakhs).

4.15.4. Time being the essence of contract no variation shall be permitted in the delivery time as prescribed in the delivery schedule. If the tenderer fails to supply and execute the work in full or part of the order as per the

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delivery schedule, the Federation shall reserve the right to cancel the order besides forfeiture of Security Deposit.

- 4.15.5. Notwithstanding anything contained in the tender schedule, no obligation rests on the Federation to accept the lowest tender and the Federation shall also have the right to accept or reject any or all the tenders fully or partly without assigning any reasons.
- 4.15.6. For violation of any of the terms and conditions of the contract, the Federation reserves the right to terminate the contract, with or without notice as applicable.
- 4.15.7. On termination of contract, the Security Deposit is liable to be forfeited and any of the resultant loss beyond Security Deposit will be recovered from the contractor by legal means apart from forfeiture of any amount due to the contractor.
- 4.15.8. (a). If the tenderer defaulted in any of the previous tenders to execute agreement or to pay Security Deposit or to supply ordered quantity either in part or full will not be eligible from participating in this tender.
- (b). If the successful tenderer either in federation TCMPF or in the DCMPU defaulted to execute agreement or to pay Security Deposit or to supply ordered quantity either in part or full shall be debarred from participating in the subsequent tenders for a period of 3 years.

**4.16. WARRANTY:**

A warranty certificate shall be furnished on the workmanship, parts and performance of the [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#) for a period of 18 months from the date of supply or 12 months from the date of satisfactory commissioning whichever is later. If any defects are noticed in the equipments during the warranty period the same should be rectified at site at free of cost and charges.

**4.17. FORCE MAJEURE:**

Failure or delay in the part of tenderer for supply due to force majeure causes enumerated here under shall be considered, provided the supplier produces documentary evidence.

- a. Any cause which is beyond the reasonable control of the tenderer.
- b. Natural phenomena, such as floods, drought, earthquakes and epidemics.

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- c. Act of any Govt. Authority, domestic or foreign, such as wars declared or undeclared quarantines, embargoes licensing control on production or distribution restrictions.
- d. Accident and disruptions such as fire, explosion, increase in power cut with respect to date of tender opening etc.,
- e. Strikes, slow down and lockouts.

The cause of force majeure condition will be taken into consideration only if the supplier notifies within 30 days from the occurrence of such eventualities. The purchaser shall verify the facts and grant such extension as the facts justify. For extension due to force majeure conditions, the supplier shall submit his representation with documentary evidence for scrutiny by the purchaser and decision of the purchaser shall be binding on the time.

#### **4.18. DISPUTES AND ARBITRATION:**

In case of disputes arising out of this tender, an arbitrator as mutually acceptable to the tenderer and Federation will be appointed by the Managing Director, TCMPPF Limited. The arbitrator's decision shall be final, conclusive and binding on both the parties.

#### **4.19. LEGAL JURISDICTION**

In case if either party to the tender is aggrieved by the award of the arbitrator so appointed as per clause 4.18 or otherwise, they can appeal to Court of Deputy Registrar (Dairying), Thiruvallur. The legal jurisdiction will be only Deputy Registrar (Dairying), Thiruvallur Court.

#### **4.20. PERFORMANCE GUARANTEE:**

If the value of supply order is Rs.50 lakhs or more, the contractor shall provide a performance guarantee at the time of getting 70% payment for the 10% of the supply order value of the [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#) ordered as Bank Guarantee from a Nationalized Bank / Scheduled Banks for a period of one year and extendable to one more year if needed.

#### **4.21. INSPECTION:**

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After issue of purchase order to L1 Firm, the material inspection will be conducted at Supplier's site and Purchaser's by TCMPF Ltd., / Third Party agency as the case it may be.

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## 5.0. PRE QUALIFICATION CRITERIA – TECHNICAL BID (PART-I)

The pre-qualification tender/PART-I technical bid will contain the under mentioned aspects pertaining to the prospective suppliers about their suitability, capacity, financial status, antecedents, past performance etc. The conditions are:-

### **5.1. Tenders not accompanied with Demand Draft or Bank Guarantee or Online Payment towards the prescribed EMD or the relevant documentary proof for the exemption thereon shall be summarily rejected**

- 5.1.1. The tenderer should be manufacturer / supplier of [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#)
- 5.2. The tenderer should have previous experience in having [designed, supplied, installed and commissioned same capacity \(or\) above of Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#), in India either to any cooperative institution or reputed dairies / firms.
- 5.3. The tenderer should have [designed, supplied, installed and commissioned same capacity \(or\) above of Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#), for which tender called for, and enclose copies of purchase order / supply order within a period of 5 years..
- 5.4. The performance certificate for [above such supply for which Purchase Order / Supply order furnished as per 5.3](#) from the reputed purchaser shall be enclosed in the technical bid part – I. The performance certificate received from purchaser / client should be of within a period of 3 years.
- 5.5. The Tenderer should have minimum experience of 5 Years in the manufacturing, [designed, supplied, installed and commissioned of Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#). Copies of Registration of firms with list of activities/GST registration certificate etc. should be enclosed as supporting document
- 5.6. If the tenderer is an authorized dealer / supplier of original equipment manufacturer (OEM), the tenderer shall furnish the authorization letter from the original equipment manufacturer (OEM) for supply of [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#). The original equipment manufacturer (OEM) can authorize only one dealer / supplier.
- 5.7. If the tenderer is an authorized dealer / supplier for [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#), then the experience of the manufacturer for supply of [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#), performance shall be taken for evaluation of technical bids, even if the supply has been made either by the manufacturer directly or through other agencies.

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**5.8. The tenderer who are downloading the document from the web site are instructed to check the web site for corrigendum after the date of pre-bid meeting, for any amendments (pre-bid – minutes) (if any issued) They are instructed to down load the above amendments and enclose it along with the technical bid document duly authenticating while submitting without fail. Failure to submit the pre-bid minutes will lead to rejection of the tender offer.**

**5.9. FINANCIAL:** The tenderer shall have *average annual sales turn-over for the last three financial years (2018-19, 2019-20 & 2020-21) equal to the tender estimated value and minimum annual sales turn-over in each of the last three financial years (2018-19, 2019-20 & 2020-21) shall not be less than 50% of the tender estimated value*

**5.10. VALIDITY OF PRICE TENDER:**

- a). The tender offer shall be kept for acceptance for a period of 120 days from the date of opening of Part – I Technical bid. The offers with lower validity period are liable for rejection.
- b). Further the tenderer shall agree to extend the validity of the bids without altering the substance and prices of their bid for further period, if any required by Federation (i.e) The Price Bid shall be valid for a period of at least 90 days (Ninety Days) from the date, notified for opening of Price Bid.

**5.11. DEVIATION:**

- a). The offers of the tenderers with deviations on technical / commercial terms of the tender will be rejected.
- b). No alternate offer will be accepted.

**5.12.** Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- a). Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- b). Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
- c). Participated in the previous bidding for the same work and had quoted unreasonably high bid prices and could not furnish rational justification to the employer.

**5.13.** The bidder should submit the proposed tentative P and I drawing, General plan for the above [Membrane Filtration Technology Based Reverse Osmosis \(RO\) Plant for Milk Concentration](#) in the Technical bid.

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**Annexure – A**  
**STRUCTURE AND ORGANISATION**

1	Name of the Applicant	:	
2	Status	:	
	Individual contractor	:	
	Sole Proprietary Firm	:	
	Firm in Partnership	:	
	Private Limited Company	:	
	Public Limited Company	:	
3	Head Office/Registered office address with phone / Telex / Fax Number	:	
4	Contact Person Name Address Mobile No Email Address	:	
5	Regional Office address with Phone / Telex / Fax Number	:	
6	Local office (if any) address with Phone / Telex / Fax Number	:	
7	Field of activity of the Applicant as per deed of Partnership / Memorandum of Association / Articles of associates (Civil) Engineering Contractor / General Engineering Contractor / Electrical Items - Engineering Contractor etc, should be specified.)	:	
8	Country and year of incorporation	:	
9	Main line of Business	:	
10	Name, position, status, capacity etc, of the Key personnel/ directors of the company (Attach organization chart showing the structure of the company / firm)	:	
11	Name, capacity and address of the signatory who has Signed the Qualification Application. Attested copy of authorization issued (either by power of attorney or as per articles of Partnership Deed / Memorandum of Association) in favour of the signatory to sign the qualification Application price Tender/ Agreement should be appended.	:	

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**Annexure – B**  
**FINANCIAL CAPABILITY**  
**(Please Annex self attested copies)**

1	Name and address of the Applicant	:			
2	Income Tax Permanent Account No. C.I. H. No.	:			
3	GST Registration No.	:			
4	Annual turn over as per audited statement of account duly certified by the Chartered Accountant during the preceding Three years (Attach attested copy of balance sheets)	:	TAX Year	Figures	Words
		:	2018-19		
		:	2019-20		
		:	2020-21		
5	Financial Position	:			
	I. Cash in hand	:			
	II. Cash in Bank	:			
	III. Current Assets	:			
	IV. Current Liabilities	:			
	V. Working Capital	:			
	VI. Net worth	:			
6	Outstanding value of works already committed and in progress and time left for completion. (Details for each work to be furnished separately)	:			
7	Amount available in capital Account	:			
	I. Paid up share capital of (Partners or Share holders)	:			
	II. Called up and subscribed share capital	:			
	III. Reserves under capital account	:			
	IV. Surplus under capital account	:			

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		:	TAX Year	Figures	Words
8	Net profit before tax during the proceeding three years	:	2018-19		
		:	2019-20		
		:	2020-21		
		:			
9	Applicant's financial arrangements.	:			
	(a) Own resources	:			
	(b) Bank credits/ Over Draft	:			
	(c) Other source (Specify the source)	:			

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**Annexure – C**  
**INFORMATION REGARDING CURRENT LITIGATION / DEBARRING /**  
**EXPELLING OF APPLICANT OR ABANDONMENT OF WORK BY THE**  
**APPLICANT**

1. (a) Is the Applicant currently involved in any Arbitration /  
litigation relating to any contract works Yes/No  
(b) If Yes, Details thereon
2. (a) Has the Applicant or any of it's constituent partners  
been Debarred/Expelled by any agency during the  
last Three years Yes/No  
(b) If yes, Details thereon
3. (a) Has the Applicant or any of it's constituent Partners  
failed to complete, any contract work during the past  
Three years. Yes/No  
(b) If yes, give details thereon

**Dated Signature of Applicant with seal**

**Note:** It any information in this Annexure is found to be incorrect or concealed,  
the Qualification Application will be summarily rejected & price tender will  
not be opened.

**Annexure – D  
AFFIDAVIT**

**(To be furnished in a Twenty Rupees Non-Judicial Stamp Paper  
duly Certified by Notary Public)**

- 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 it's constituent partners have abandoned any work/works of similar nature and magnitude in India, during the Last Three years.
- 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, during the last Three Years.
- 4). 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 Dy. General Manager (Engg.), TCMPF Ltd., Head Office, Aavin Illam, 3-A, Pasumpon Muthuramalinganar Salai, Nandanam, Chennai – 600 035 to verify the statement made by me/us or to assess my/our competence and general reputation.
- 5). I/We the undersigned, understand(s) that further qualifying information / clarifications on the statement made by me / us may be requested by The Dy. General Manager (Engg.), TCMPF Ltd., Head Office, Aavin Illam, 3-A, Pasumpon Muthuramalinganar Salai, Nandanam, Chennai – 600 035. and agree(s) to furnish such information/ clarification within SEVEN Days from the date of receipt of such request from The Dy. General Manager (Engg.), TCMPF Ltd., Head Office, Aavin Illam, 3-A, Pasumpon Muthuramalinganar Salai, Nandanam, Chennai – 600 035.

**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)

The above named deponent has understood the contents well and solemnly and sincerely declared and affirmed by the deponent in my presence at.....and signed before me on this day of .....

(Seal).

**(Signature of the Notary Public)**

**Annexure – E**  
**SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR AVAILABILITY OF**  
**CREDIT FACILITIES**

**BANK CERTIFICATE**

This is to certify that M/s ..... is a reputed company with a good financial standing.

If the contract for the work, namely, \_\_\_\_\_ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs..... to meet their working capital requirements for executing the above contract.

Signature of Senior Bank Manager .....  
Name of the senior Bank Manager .....  
Address of the Bank .....

Stamp of the Bank

**Note: Certificate should be on the letter head of the bank.**

## **6.0 EVALUATION AND COMPARISON OF THE TENDER OFFERS**

- 6.1. The tenders will be evaluated strictly as per the Tamilnadu Transparency in Tenders Act 1998 and the Tamilnadu Transparency in Tenders Rules 2000 and amendments made thereon in the Act & Rules by the Government.
- 6.2. The tender offers received will be examined to determine whether they are in complete shape, all required data's have been furnished, properly signed and generally in order and confirms to all the terms and conditions of the specification without any deviation.
- 6.3. For the purpose of evaluation of tender offers, the following factors will be taken into account for arriving the evaluation price.
  - a). The quoted price will be corrected to arithmetical errors.
  - b). In case of discrepancy between the price quoted in words and figures, lower of the two shall be considered.
  - c). The evaluation of offer will be computed by taking into account Design, Supply, Erection, Installation, Testing and Commissioning put together.
- 6.4. Bidders should quote their rates both in figures and in words for each item per unit and amount for each item of work for full quantity. Grand total of the whole contract should be furnished without fail in the Price Quote Schedule of Price Bid.
- 6.5. The bidder shall fill in rates and prices and line item total (both in figures and words) for all the items of the works described along with total bid price (both in figures and words). Items for which no rate or price is entered by the bidder will not be paid for by the purchaser when executed.
- 6.6. The evaluation for L1 shall be on total end price of all items.

Noted and agreed to the above

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## **7.0. TECHNICAL SPECIFICATIONS**

### **DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF MEMBRANE FILTRATION TECHNOLOGY BASED REVERSE OSMOSIS (RO) PLANT FOR MILK CONCENTRATION.**

#### **TECHNICAL SPECIFICATION**

##### **1. GENERAL DESCRIPTION**

It is proposed to install a Reverse Osmosis (RO) plant for milk concentration of capacity 5000 and 2000 Liters per hour along with accessories for Metro Dairies and DCMPU. The required plant capacity and locations are as follows.

1. 5000 LPH – 3 nos (Metro Dairies Ambattur, Sholinganallur and Tiruchirappalli Dairy).
2. 2000 LPH – 1 Nos (Coimbatore Dairy)

##### **2. SCOPE OF WORK**

The works consists of design, supply, erection, testing and commissioning of the RO plant with accessories for concentration of the milk. The equipments are to be skid mounted and installed in the Dairy with necessary interconnections. The CIP cleaning equipments are also to be supplied and installed to carry out the cleaning. **On commissioning, the plant to be operated for one month by the bidder and concentrate output as per the specifications shall be obtained at rated capacity.**

**The input milk quality shall be as follows**

**Fat 3.9% – 4.2%**

**SNF 8% - 8.5 %**

**Temperature. < 10° C.**

##### **Design Parameter consideration for RO System**

###### **DESIGN FEATURES:**

The design of Milk concentration system shall be based on the best available, proven Dairy Reverse Osmosis technology reflecting the latest

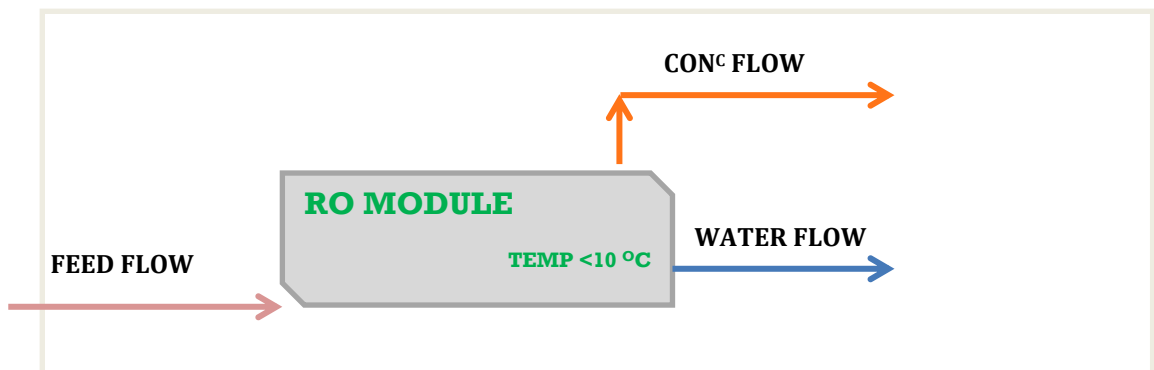
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innovation in the design, prudent construction practices, and best industrial practices in operation and maintenance methods.

The proposed Milk concentration Plant shall consist minimum of the following components i.e. Feed cum CIP Tank, Feed Pump, High Pressure Pump, Recirculation pump, Dairy RO membranes, Sanitary membrane housing in SS 304, chiller, PLC Panel and required instrumentation etc.

**Flow pattern for milk in the system:**



**TECHNICAL PARAMETERS OF THE CONCENTRATION SYSTEM**

S No	DESCRIPTION	2000 LPH	5000 LPH
1	Application	Milk Conc.	Milk Conc.
2	Nature of process fluid	Milk	Milk
3	Inlet Process Temperature °C (Max.)	4 to 10	4 to 10
4	Separation Technology	Membrane	Membrane
5	Membrane Cut-Off to be used	RO Membrane	RO Membrane
6	Mode of Operation	Continuous	Continuous
7	Concentration Factor Whole Milk Skim Milk	1:1.6 1: 2.5	1:1.6 1: 2.5
8	Product in Feed SNF %	8 %	8 %
9	Product in Feed Fat %	4 %	4 %
10	Total Feed Solids %	12 %	12%
10	Product in Retentate SNF %	12.7 %	12.7 %
11	Product in Retentate SNF %	6.3 %	6.3 %
12	Total Retentate Solids %	19 %	19%
13	Outlet Temperature of	8 to 10	8 to 10

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	Retentate in ° C after chiller		
13	Total Retentate collected in Lit/Hr	1260	3150
14	Total Permeate collected in Lit/Hr	740	1850
15	Continuous Operating Hours	10	10
16	Cleaning time Hours	3	3
17	No's of Dairy RO Membrane	12	20
18	Approximate Electric Load	23 KW	33 KW

The Milk concentration Plant shall be constructed for 2 KLPH/ 5 KLPH Capacity with the following key systems and facilities.

- Sanitary design membrane-based RO Plant for Milk Concentration shall be provided
- The origin of the Membranes should be from U.S.A or Japan.
- The plant should be based on single loop design up to 1.6 Concentration factor and above shall be of 2 loop design.
- Design of the RO plant shall be skid based and in fully Stainless Steel 304 / 316 construction
- Required tanks, pumps, piping, fittings, for the product is in the scope of the bidder.
- RO plant shall be fully automatic and PLC based operation.
- All Pump construction both casing and wetted parts should be in Stainless Steel 304 / 316 and should be provided with VFD controller.
- Standard instrumentation consisting of Pressure Transmitters, Temperature sensor, Magnetic flow transmitters, level switches to be installed in the system.
- Membranes needs to be 100% WET tested and manufacturer test certificate needs to be provided
- Membranes should be USDA accepted. Components should conform to FDA regulation CFR Title 21, "3A Sanitary Standards for Crossflow Membrane Modules, Number 45-02", EC Reg. No. 1935/2004, and EU Reg. No. 10/2011
- Membrane sizing needs to be 8 "dia and 46 Mill construction.

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- Heat exchanger/ chiller shall be of Tube in Tube to be provided to control output product temperature.

**Salient Features (RO):**

Systems shall be fully self-contained and skid-mounted, providing space saving, short installation time, easy maintenance and membrane replacement. The units shall be fully automated. The units are to be fully tested prior to delivery and shall come fully cabled ready for production.

**The following features shall be provided in the system.**

- Continuous on line checking and display of Pressure, Temperature, Flow, and TMP process parameters.
- All contact parts will be of Stainless steel 304 / 316.
- FDA approved Elastomer for sealing.
- Low hold-up product volumes in the System
- Non-Flameproof System.
- Online TMP calculation.

**Automation and Control Features:**

- The system shall be fully automatic with PLC based controlled system.
- The parameters such as temperature, pressure, level shall be continuously controlled by the system.
- Necessary alarms and interlocks shall be provided.

**SCOPE OF SUPPLY**

The system shall be skid mounted with 2 circulation loops in series. The balance cum CIP tank will be in the bidder scope. The product to be concentrated (feed) will be received in this tank & it will pass through these two loops in series & get concentrated to desire product concentration.

**The supply and laying of SS pipe lines of adequate size from the milk silo to balance tank of RO plant and output condensed milk from chiller to condensed milk tank with necessary valves and pump is in the scope of the bidder. The milk silo and condensed milk tank will be supplied by the purchaser.**

**Feeding section:**

- 1.No. of Feed-cum-CIP Tank with necessary Instruments & Valves
- 1 No. of Level switch for the Feed/ CIP tank
- 1 No. of Pre-filter.
- 1 set of Pressure Indicators

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- 1 No. Feed Pump with VFD
- 1 No. of Booster Pump with VFD
- 1 No. of Flow Transmitter
- 1 Lot of Interconnecting Piping & Valves.

**Circulating Loop:**

Each loop consists of following major equipment's  
No of loops in system: 2 Nos.

- 1 No. of Circulation Pump with VFD
- 1 Set of RO filtration Membranes
- 1 Set. Housings to accommodate RO Membranes
- 1 Set of Pressure Indicators
- 1 Set of Pressure Transmitters
- 1 No. of Temp Transmitter
- 1 No. of Heat exchanger.
- 1 Lot of Interconnecting Piping & Valves

**Permeate outlet**

- 1 Set of Flow Meter
- 1 No. of Sight Glass
- 1 Lot of Interconnecting Piping & Valves

**Retentate outlet**

- 1 No. of Sight Glass
- 1 No. of Flow transmitter
- 1 No. of PID Control valve.
- 1 Lot of Interconnecting Piping & Valves
- Chiller of capacity 2 KLPH for chilling the output to required temperature

**CIP Circuit**

- CIP pumps. (Feed pump & circulation pump shall be used as CIP pumps.)
- 1 Lot of Interconnecting Piping & Valves.

**System Skid**

All the above items like Membrane Module, Pump and CIP Tank (excluding Panel) shall be mounted on SS skid.

**Electrical & Automation Panel**

- Stainless Steel 304 body Electrical & Automation Panel.
- VFDs for Feed, Booster & Circulation pumps.
- Programmable PLC with touch screen HMI
- Internal cabling (within control panel)
- Advanced control mechanism

Noted and agreed to the above

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## Battery Limit:

**TCMPF Ltd., will provide the following for plant operation:**

- Power supply: 415 V AC  $\pm$  10 three phase, 50 Hz for all drive.
- Incoming supply 3 phase with neutral 415 V for the MCC panel will be provided by TCMPF. The electrical connections from MCC to motors and other equipments are in the scope of bidder.
- Service Water: As per system requirement at desired pressure at the inlet.
- All the Media, chemicals etc required for operation, cleaning, sanitization etc., for testing and trial operation shall be in the scope of the bidder.
- Oil free Air: At One single location for pneumatic valves (if required).
- Steam connection will be available at one single location and bidder has to provide necessary PRV and control valves up to the plant.

### 1. Preferred make:

Sl.No.	Description	Make
1	Feed and Circulation Pump, Milk pump	GRUNDFOS / ALFA LAVAL/ FRISTOM
2	Motor	SIEMENS / KIRLOSKAR/ CROMPTON OR OEM SUPPLIED EFFICIENCY. IE 4 AND ABOVE
3	RO membrane	HYDRANAUTICS / ALFA LAVAL / SPX
4	PLC and HMI	SIEMENS / DANFOSS /ALLEN BRADLEY / YOKOGAWA
5	Instrumentation	SIEMENS / DANFOSS /ALLEN BRADLEY / YOKOGAWA
6	Stainless Steel pipe and fittings	ALFA LAVAL / TETRAPAK / SPX ASTAVINAYAGA
7	Stainless steel tanks	ALFA LAVAL / TETRAPAK / SPX ASTAVINAYAGA
8	Chiller / PHE / Tube in Tube	ALFA LAVAL / GEA / SPX

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NAME OF ITEM / WORK	:	<b>DESIGN, SUPPLY, ERECTION, INSTALLATION, TESTING AND COMMISSIONING OF MEMBRANE FILTRATION TECHNOLOGY BASED REVERSE OSMOSIS (RO) PLANT FOR MILK CONCENTRATION FOR VARIOUS METRO / DCMPU DAIRIES</b>
TENDER NOTICE REFERENCE NO	:	3192/Proj.3/2022, Dated:04.04.2022

## **PART – II**

### **COMMERCIAL BID**

THE TAMILNADU COOPERATIVE  
MILK PRODUCERS' FEDERATION LTD  
CHENNAI 600 035

### **QUALIFICATION**

The commercial offers of such of those tenderer who qualify themselves for being considered for **Design, Supply, Erection, Installation, Testing and Commissioning of Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration for Various Metro / DCMPU Dairies** by fulfilling the entire terms and conditions as laid in Part I "Technical Bid" of this tender, will be considered for the finalization of the tender. Other commercial offers not qualifying as above will be rejected outright.

**Design, Supply, Erection, Installation, Testing and Commissioning of  
Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for  
Milk Concentration for Various Metro / DCMPU Dairies**

**ABSTRACT  
PRICE QUOTE SCHEDULE**

**In Rupees**

S.N.	DESCRIPTION				RATE
<b>A</b>	<b>SUPPLY:</b>				
1	Basic Price (Break up details – to be furnished in a separate enclosure)				
2	Packing Forwarding if any				
3	Transportation charges to site including loading and unloading charges				
4	Transit insurance				
5	GST/IGST				
	<b>Sub-Total (A)</b>				
<b>B</b>	<b>Installation, Testing and Commissioning</b>	<b>Material cost if any</b>	<b>Labour Cost</b>		
1	Unpacking, shifting and positioning charges				
2	Installation, Testing and Commissioning charges				
3	GST/IGST				
	<b>Sub Total (B)</b>				
	<b>TOTAL PRICE (A+B)</b>				
	<b>TOTAL PRICE IN WORDS</b>				

SIGNATURE OF THE TENDERER WITH SEAL

## BREAK-UP DETAILS FOR ABSTRACT PRICE QUOTE SCHEDULE

In Rupees

S.NO	NAME OF THE EQUIPMENT	CAPACITY	QTY	BASIC PRICE	P&F	TRANSPORT CHARGES	TRANSIT INSURANCE	GST/ IGST	TOTAL PRICE
1.0	Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration	5000 LPH	3 Set						
1.1	Erection, Installation, Testing and Commissioning		3 Job						
2.0	Membrane Filtration Technology Based Reverse Osmosis (RO) Plant for Milk Concentration	2000 LPH	1 Set						
2.1	Erection, Installation, Testing and Commissioning		1 Job						
3.0	GRAND TOTAL								

**Note:-**

- 1). The rates should be quoted separately for equipment-wise with break-up of Basic Price, Packing & Forwarding, Transportation charges, Loading and unloading charges, Transit insurance, GST/IGST for supply, Unpacking, shifting and positioning charges, Erection & commissioning charges, GST/IGST for Erection & commissioning etc., which should be totalled and mentioned in the Abstract of Price Quote Schedule.
- 2). The tenderer shall furnish break up details for the above in a separate sheet for Price, GST/IGST, with the percentage.
- 3). All the rates should be only in terms of Indian Rupees.
- 4). Tenderer should indicate origin of country from which the equipment is imported and has to produce authorization letter from OEM.
- 5). Phrases like `Extra`, `as applicable`, `at the prevailing rate` etc. should not be quoted to avoid ambiguity.

**Seal of the firm  
tenderer**

**Signature of the**

Witness:

1

2

Date: