

TERMS OF REFERENCE

PROPOSED DOUBLE PASS REVERSE OSMOSIS SYSTEM at HDU

1. OBJECTIVE *(purpose of the project)*

- 1.1. This Terms of Reference (TOR) is being issued to contract a qualified vendor to **SUPPLY AND INSTALLATION OF DOUBLE PASS REVERSE OSMOSIS SYSTEM** according to the timeline that will be prescribed by Central Luzon Doctors' Hospital (CLDH).

2. OVERVIEW *(brief background of the project)*

- 2.1. Central Luzon Doctors' Hospital (CLDH) is a private 175-bed tertiary-level training hospital located along Hospital Drive, Barangay San Vicente, Tarlac City, Tarlac, Philippines. CLDH is accredited by the Department of Health (DOH) and by the Philippine Health Insurance Corporation (PhilHealth). CLDH is a proud member of the Private Hospitals Association of the Philippines (PHAP) and the Philippine Hospital Association (PHA), and recently the Institute for Healthcare Improvement (IHI)
- 2.2. Supply and installation of 14,000GPD+10,000GPD Double Pass Reverse Osmosis System.

3. COMMERCIAL REQUIREMENTS

- 3.1. Vendor must be an accredited vendor/service provider of CLDH.
- 3.2. If not yet accredited, the following requirements must be submitted to Procurement Department:
 - 3.2.1. Company Profile
 - 3.2.2. Latest Audited Financial Statements
 - 3.2.3. List of Clients with contact numbers
 - 3.2.4. List of Products
 - 3.2.5. BIR2303 and other business permits
- 3.3. Currency must be in Philippine Peso (PhP).
- 3.4. Prices are VAT inclusive.
 - 3.4.1. The 12% VAT, when applicable, shall be added as a separate line item in the Invoice by the awarded vendor.
- 3.5. Price Validity: 120 days upon submission of bid

3.5.1. In exceptional circumstances, CLDH may solicit the Bidder's consent to an extension of the bid validity period.

4. TECHNICAL REQUIREMENTS (*bidder's eligibility*)

4.1. Vendor must be at least in possession of an updated Class B or higher PCAB license

5. DELIVERABLES

In executing the agreement, the vendor shall provide the following services for the solution covered hereof:

- 5.1. Supply and installation of 14,000GPD + 10,000GPD Double Pass Reverse Osmosis System.
- 5.2. Installation and Training.
- 5.3. Specifications:
 - A. 14,000GPD First Pass Reverse Osmosis System
 - a.1). 2 units alternating CLD(F) 2-15 5HP Reverse Osmosis Multi Stage Vertical Pump (Three Phase)
 - a.2). 7 units 4040 Thin film Hydraulics Membrane with large spiral design (US BRAND)
 - a.3). 7 units 4040 FRP pressure membrane vessel
 - Fiber glass construction
 - End entry connections
 - Full range of diameter and pressure ratings
 - High resistance to chemical and high level of chlorides
 - True lock integrated locking system
 - a.4). 1 set TL4 (20x5) S/S filter housing with 5micron filter
 - a.5). All components in Contact with Pure Water meets AAMI Standard
 - a.6). 2 units Flow Meter (0-20GPM) percentage rejection, percentage recovery, permeate/product flow.
 - a.7). 1 unit flow meter (0-10GPM) for Recycle water.
 - a.8). 2 units Dial Stainless 350 and 150 PSI Oil Pressure Gauges.
 - a.9). 1 unit Pressure Regulator
 - a.10). 1 unit digital conductivity meter (TDS meter for 1st stage pure water product)
 - a.11). 1 set 1500 liters First Stage Polyethylene Storage Tank

- a.12). Automatic Control System
 - a.13). The system should be equipped with a recycle valve and with flushing option.
 - a.14). 1 unit Low Pressure Switch controlled by timer that will automatically stops the RO pump after detection of low pressure.
 - a.15). 1 unit Automatic Shut-off Solenoid Valve 1" NPT (bypass valve that can be activated manually if ever the solenoid valve malfunction.
 - a.16). 1 unit Auto Flushing Solenoid Valve 1/2 " NPT
 - a.17). The RO system Stainless Steel Full Skid
 - a.18). An independent control system
 - a.19). Equipped with sampling port for product water sampling after membrane.
 - a.20). 1 set chemical tank with injection pump for system disinfection.
- B. 10,000GPD Second Pass Reverse Osmosis Unit
- b.1). 2 units CLD(F) 2-13 3HP Reverse Osmosis Multi Stage Vertical Pump (Operating pressure 200 to 250 PSI, made of high-grade stainless steels (220VAC three phase).
 - b.2). 5 units 4040 Thin Film Hydranautics Low Energy Membrane with large spiral design (US BRAND).
 - b.3). 5 units 4040 FRP pressure membrane vessel
 - Fiber glass construction
 - End entry connections
 - Full range of diameter and pressure ratings
 - High resistance to chemical and high level of chlorides
 - True lock integrated locking system
 - b.4). 2 units panel mounted 0-10 gpm flow meter.
 - b.5). 1 unit Dial Stainless 350 PSI Oil Pressure Gauges.
 - b.6). 1 unit Pressure Regulator Control Valve 1" NPT S/S 316
 - b.7). 1 unit digital conductivity meter (TDS (ppm) meter for 2nd stage pure water product).
 - b.8) Recyclable feature for the reject water from 2nd Pass going to Raw Tank.
- C. Pre-Treatment Equipment Specifications
- c.1). 1 unit 18" x 65" Multi-Media FRP Tank (with Graded Media: Peebles, Silica Sand, Anthracite and Garnet 10-20micron removal). Must include manual/automatic timer backwashing head (Runxin Automatic Head F75A (4" thread) (with Graded Media: Peebles, Quartz

Sand, Industrial Grade Activated Carbon). Must include pressure gauges on the inlet and outlet of tank, water sampling and emergency bypass valve.

c.2). 2 units 18" x 65" Granulated Activated Carbon FRP Tank. Must include manual/automatic timer backwashing Head (Runxin Automatic Head F75A 4" thread) (With Graded Media: Peebles, Quartz Sand, Industrial Grade Activated Carbon). Must include pressure gauges on the inlet and outlet of the tank, water sampling and emergency bypass valve.

c.3). 1 unit 18" x 65" Water Softener FRP Tank with Manual/Automatic Backwashing Head (Runix F74A 4" thread) (with Graded Media: Peebles, Purolite Resin C-100E Resin). Must have pressure gauges on the inlet and outlet of the tank, and water sampling and emergency bypass valve.

c.4). Sampling Port after Raw water tank, Multi-Media, Carbon and Water Softener filter.

c.5). Individual pressure gauge for Multi-Media, Carbon and Water Softener.

c.6). 1 unit 1500 Liters RAW Water Tank with Float valve assembly.

c.7). 1 unit Brine Tank with Hose and Strainer (Capacity – BTW 180L) (White Bond)

c.8). 2 units automatic pump control

c.9). 1 unit water pressure control valve

c.10). 1 unit handheld digital TDS meter

c.11). 2 units 3HP RAW Water Multi Stage S/S Pump head (220VAC Three Phase).

c.12). Complete Piping using Scheduled 40 PVC Pipe, Ball Valves and Fittings (Gray).

c.13). Stainless Steel Fittings

c.14) Water level hose indicator for Raw Water tank

D. Distribution System

d.1). 1 unit 1000 liters Polyethylene 2nd stare pure water storage tank

d.2). 2 units 1 HP S/S head distribution Pump (220VAC Three Phase)

d.3). 2 units Automatic Pump Control

d.4). 1 set automatic water pressure regulator

d.5). 1 unit Twenty (20) inches Clear Filter Housing with 0.22 Micron Filter

d.6). 1 unit 12GPM Ultra Violet Lamp

E. Electrical Control System- Automatic water control and monitoring system for whole water treatment including the RO machine.

e.1). 1-unit Control Panel Box

e.2). 2 sets Programmable Logic Control for System auto and manual operation and alarm.

Application:

- Auto alternate operation
- Pump tripped auto changeover
- Pump tripped alarm
- Fill up signal on delay
- Pure water auto recirculation
- Low-high pressure alarm
- Reverse osmosis flushing
- Flashing general alarm

e.3). 4pcs selector switch, 3 position

Operation:

- Raw water pump-select
- Reverse Osmosis pump-select (first pass)
- Reverse Osmosis pump-select (second pass)
- Pure water pump-select
- Mode

e.4). 3pcs illuminated pushbutton (self-latch)

Application:

- Manual Pump

e.5). Key switch for manual recirculation system

e.6). Magnetic starter (fuji) for pumps on/off control

e.7). Over load relay (fuji) for pump motor over current protection

e.8). Omron timer

Application:

- Pump motor tripped

- Solenoid on/off
- Power on delay
- UV supply
- Level and pressure controls
- General alarm

- e.9). Indicators (LED) for on/off level, status, pressure and abnormality
- e.10). Emergency stop (idec) for safety
- e.11). 5pcs circuit breaker
- e.12). Royal cord wire

F. Support/Service Maintenance

- f.1). Installation of the water treatment system and training
- f.2). Accessibility to address any malfunction or technical problems within the warranty period
- f.3). Availability of spare parts locally
- f.4). Availability of service personnel within the warranty period
- f.5). Operator and technical manual
- f.6). Complete initial water analysis

- 5.4. Contractor shall be responsible to provide and implement safety regulations as per specified in the standard COSH manual. Certain penalties shall be implemented in the contract.
- 5.5. Bonds and Insurances
- 5.6. The CONTRACTOR shall, not later than fifteen (15) calendar days from the execution of this Contract, and as a condition for the release of the down payment and subsequent payments for progress billings, submit to the OWNER the following bonds (callable on demand and in the form of Surety Bond) and insurance which the CONTRACTOR shall, at its own expense, procure from a company acceptable to the OWNER:
- 5.7. Performance Bond in an amount equivalent to Thirty (30%) percent of the Contract Price to guarantee the CONTRACTOR'S complete, satisfactory, faithful, and due undertaking of the PROJECT in accordance with this Contract and the Contract Documents, and of the CONTRACTOR's warranties, representations, and obligations under this Agreement.
- 5.8. Surety Bond in an amount equivalent to the (20%) down-payment released by the OWNER to guaranty payment for any unpaid wages due to the

CONTRACTOR's employees that the OWNER may be held liable for under the Labor Code and other related laws if applicable, as well as any unpaid claims of suppliers of materials used in connection with the PROJECT, if any; and

- 5.9. Warranty Bond in the amount equivalent to ten percent (10%) of the Contract Price to guarantee the completed Works against defects for a period of one (1) year from date of issuance of the Certificate of Completion and Final Acceptance by the OWNER.
- 5.10. CONTRACTOR'S All Risk Insurance Policy, from a bonding company acceptable to the OWNER in an amount equivalent to one hundred percent (100% base on contract) of the Contract Price. The beneficiary of such policy shall be the OWNER. The CONTRACTOR shall keep the Insurance Policy in force throughout the Completion Period and any authorized extension thereof.
- 5.11. The insurance coverage shall include a Third-Party Liability (TPL) for death, bodily injury and property damages. This insurance shall also cover damage to above and underground utilities, cables and pipelines due to the CONTRACTORS' work.

6. LOGISTICS

- 6.1. The Service Provider shall be responsible for its own office space and logistical support for the duration of the engagement. The Service Provider shall also be responsible for its own service vehicle/s.
- 6.2. For the Service Provider's regular ocular inspections of the designated sites of the aforementioned Work Hubs, the Service Provider must schedule accordingly with CLDH at least three (3) days before the target day of inspection, to which CLDH will then ensure the accessibility to the site or inform the Service Provider otherwise so that an alternative date can be identified.

7. TERMS OF PAYMENT

- 7.1. The project shall have a fixed terms of payment scheme
 - 7.1.1. 20% down payment
 - 7.1.2. 80% progress billing every month
 - 7.1.3. 10% retention shall be taken from each billing and will be released 30 days after acceptance of project

7.1.4. Payment shall be made within thirty (30) days from receipt of billing.

8. SELECTION CRITERIA (states how bids will be evaluated)

Evaluation Criteria: 60% Technical, 20% Certifications and 20% Financial / pass-fail / complying – noncomplying

9. TIMELINE

9.1. Target completion date: 20 Calendar Days

9.2. Submittal of bids will be:

9.2.1. WHEN: 3 working days after approval of request 3:00 PM.

9.2.2. WHERE: CLDH Procurement Office

Note that late submittals shall not be entertained

10. GENERAL NOTES/ INSTRUCTIONS

10.1. The Proposal should be addressed to and forwarded as follows:

10.1.1. CZENDRA I. BAUZON

10.1.2. Procurement Manager

10.1.3. CENTRAL LUZON DOCTORS' HOSPITAL

10.1.4. Hospital Drive, San Vicente Tarlac City, 2300

10.2. Proposals shall be submitted in sealed envelopes labelled accordingly. Bidders shall prepare two (1) hard copy and a CD with an excel version of the exact bid.

10.3. Penalty of 1/10 of 1% of the total contract value without any maximum cap shall be charged to the vendor for every day of delay of product deliverables.

10.4. In case of conflict or vendor failed to deliver, a turn-key solution must be provided without cost to CLDH.

10.5. CLDH reserves the right to accept or reject any submission, declare a failure of bidding or not award the contract at any time without incurring any liability to the bidders.

- 10.6. Information relating to the evaluation of proposals and recommendations concerning awards shall not be disclosed to the bidders who submitted the proposals or to other persons not officially concerned with the process, until the winning firm has been notified that it has been awarded the contract. Likewise, all information disclosed to the bidders during the conduct of the bidding process shall not be used for any other purpose other than what is covered by this TOR.