



# TENDER DOCUMENT

**TURNKEY DESIGN, SUPPLY, COMMISSIONING AND MAINTENANCE OF:**

- 1) NEW PSA PLANT**
- 2) NEW CENTRAL VACUUM PLANT**
- 3) EXTENSION OF THE EXISTING CENTRAL OXYGEN AND VACUUM RETICULATION**
- 4) SERVICING AND REPAIR OF THE EXISTING CENTRAL OXYGEN AND VACUUM RETICULATION**
- 5) MAINTENANCE OF THE ENTIRE PLANT FOR A PERIOD OF THREE (3) YEARS.**

**AT THE GOBABIS HOSPITAL, GOBABIS, NAMIBIA**

**(Hereafter called Gobabis Medical Gas Project)**

**DIRECT CONTRACT WITH**

**RTC NPC (EQUIP)**

**(hereinafter referred to as "RTC")**

**ISSUE DATE: 14 April 2022**

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## 1 PREAMBLE

The Gobabis Hospital (Hospital) is a regional Public Hospital operated by the Namibian Ministry of Health and Social Services (MoHSS). The hospital is located in Gobabis in the Omaheke Region of Namibia.

Right to Care is a Non-Governmental Organisation (NGO) that is the implementation partner of USAID for healthcare aid in Southern Africa.

RTC has determined that the installation of a Pressure Swing Absorption (PSA) Oxygen Generating- and central vacuum plant will significantly improve the healthcare delivery capability of the abovementioned Hospital.

This document provides the technical and commercial specification for the acquisition, installation, commissioning and maintenance of such equipment on location.

## 2 SCOPE OF WORK

This tender makes provision for a turnkey project for the following:

- 1) One (1) PSA Oxygen Generating Plant to deliver oxygen at a flowrate, purity and pressure as called for in this tender specification.
- 2) Delivery to site, offloading and level placement of the plant pre-assembled inside a standard container onto a prepared concrete plinth.
- 3) One (1) central vacuum pump system capable of evacuating air at a flow-rate as called for in this tender specification.
- 4) Delivery to site, offloading and installation of the plant inside an existing plantroom.
- 5) An extension of the existing medical gas reticulation with 60 Oxygen and 49 Vacuum Terminal Units (TUs), extending the existing back-up cylinder bank to 7x2, upgrading of the pressure reducing and change-over system and extending the piping and AVSUs as required.
- 6) Servicing and repair of 17 existing oxygen TUs.
- 7) Commissioning and certification of the entire medical oxygen and vacuum system excluding the existing PSA.
- 8) Supply of OEM Manuals including the Operational Manual, Design and As-Build drawings of the entire installation.
- 9) Maintenance and Operation of the plant for a term of three (3) years. This includes remote monitoring and record-keeping of flow and fault conditions. Fault or out-of-specification production to be resolved within four (4) hours.
- 10) One (1) automatic emergency diesel generator to support the new PSA and Vacuum pumps.
- 11) All electrical connections into the hospital main power supply and distribution boards, reticulation and switchgear for the PSA and vacuum plant.

at the Gobabis Hospital, Omaheke Region, Namibia.

## 3 EXCLUSIONS

The following is hereby excluded:

- 1) All civil works

#### 4 TYPE OF CONTRACT

This contract will be a direct contract to be executed by the successful tenderer who will be the "Contractor", as referred to in this document and RTC who will be the "Client". The standard RTC contractor application/approval process will apply should the successful bidder not be a current RTC vendor.

The appointment will be according to the Joint Building Contracts Committee (JBCC) Minor Works Contract or the International Federation of Consulting Engineers (FIDIC) contract. The Principal Building Agreement, Principal Building Agreement Contract Data EC and Principal Building Agreement CE will be used as the contract appointment document.

RTC will act as the Engineer and Principal Agent.

The Principal Agent shall make provision for and purchase the above documents.

#### 5 TENDER ELIGIBILITY

This is an open tender to all prospective contractors

The tender will be issued to any local supplier that are able to substantiate their competence with a track record of manufacturing and operation of PSA and vacuum plants.

Contractors that are registered in Namibia and/or are familiar with the installation (i.e., have previously performed work) will be given the opportunity to submit a proposal.

#### 6 TENDER ADJUDICATION

The tender will be adjudicated by RTC as per approved Procurement Policy. A written recommendation will be made by the engineers to RTC. RTC will review the recommendation against their procurement policy and will issue a final appointment instruction to the Principal Agent.

The tender will be awarded based on local content, completeness of document submission (proving competency and capability), design efficiency and price according to the following formula:

Description	Percentage	Scoring
Local Content	10%	Namibian Company = 10% Not attached or Foreign = 0%
Competency	10%	Each previous PSA project =2% (max 10%), Not attached = 0%
Design	30%	Best design according to engineering panel of experts = 30% Worst design received = 0%
Price	50%	Highest Price = 0% Lowest Price = 50% Other prices scored pro-rata according to value
<b>TOTAL</b>	<b>100%</b>	

#### 7 REQUIRED COMPETANCY

Only submissions from companies with proven capability and competence will be considered. The Contractor will be:

- 1) A registered local Company, with attached Company registration documents bearing proof of Company registered address.
- 2) Be in good standing with the local revenue service.
- 3) Be able to demonstrate successful previous installations of PSA and vacuum equipment.
- 4) Have adequate technical capacity and spare parts to maintain the equipment for three (3) years.
- 5) Ability to monitor oxygen production remotely.

## **8 CONTRACT PRICE, ADJUSTMENT AND VARIATION ORDERS**

This will be a fixed price contract based on the pricing schedule.

The contractor may request a Variation Order of up to five (5) % of the works value for eventualities outside the control of the contractor. VOs shall be approved at the sole discretion of RTC.

The tenderer shall make provision in his tender base price for possible fluctuations in all other costs.

No retention shall be applicable.

## **9 EXTRA PAYMENTS**

Tenderers must acquaint themselves fully with the local conditions and the requirements of this specification. RTC will not consider any later claims by the successful tenderer for extra payment arising out of underestimating any of the requirements.

## **10 RATE OF EXCHANGE**

This tender will not be subject to fluctuations in the rate of exchange. The tender needs to be priced in the local currency of the country where the project will be executed.

## **11 PROGRAMME AND COMPLETION**

The period for completion of the work will be agreed on between the Principal Agent and the Contractor taking the operational requirements of the facility into account. The Principal Agent shall indicate on the JBCC or FIDIC contract the days required to complete the project.

The JBCC or FIDIC contract will be adjusted not to penalise the contractor due to restriction in access.

The tenderer shall state the time, in days, required for completion of the contract in the Price Schedule and such time will be used as contractual completion time of the project.

## **12 METHOD STATEMENT**

The Contractor will be required to complete a work method statement for the installation.

## **13 HEALTH AND SAFETY**

The Contractor will adhere to all H&S requirement of the hospital.

The Contractor shall supply and maintain all safety equipment, personal protective equipment and any other assistance and equipment required to gain access to work areas.

## **14 ACCESS AND CONTROL**

The contractor and all other employees will be required to keep a register of time on site and handed to the Principal Agent on request.

## **15 STANDARDS AND CODES**

The installation shall be according to the following standards as far as practical.

- 1) Reticulation: ISO7396-1: Medical Gas Pipeline Systems
- 2) Medical Gas System Design: Health Technical Memorandum 02-01: Medical gas pipeline systems.
- 3) PSA: WHO Technical Specifications for Pressure Swing Adsorption (PSA) Oxygen Plants dated 8 June 2020.

## **16 SITE OFFICE**

If required the contractor, in coordination with the maintenance manager shall provide his own site office.

The safekeeping of all equipment and tools shall be the responsibility of the contractor until the acceptance date.

## **17 HANDLING OF MATERIAL**

The Contractor shall be responsible for providing all the required equipment for the off-loading and proper handling of the plant and material on site.

## **18 DOCUMENTS APPLICABLE**

To determine the location of the additional TUs, the following documents should be read in conjunction with this tender:

- i. Right to Care Engineer's Report: Gobabis Medical Oxygen and Vacuum System dated 3 February 2022

Any discrepancy between the Contractors proposed design and the recommendations made in the abovementioned report, must be declared in the covering letter of the tender submission.

## **19 INSPECTION AND TESTING**

On completion of the installation, the contractor shall carry out his/her own inspections to ensure that the installation and equipment comply with safety standards before notifying the Engineer.

The Engineer will not act as the Contractor's inspector or quality control official but to ensure that the work has been completed and to standard.

The engineer should be notified no less than 5 days before completion for sign-off. No snagging procedure shall apply. Work completion shall be accepted or rejected per section as set out below.

## **20 CONTRACT COMPLETION MILESTONES**

### **20.1 Sectional Completion**

Sectional Completion and Payment Certificates will be issued once the following has been achieved:

1. Installation and commissioning of the PSA Unit on site, including Commissioning documentation and OEM Manual has been accepted by the engineer.
2. Installation and commissioning of the Vacuum Plant on site, including Commissioning documentation and OEM Manual has been accepted by the engineer.
3. Installation and commissioning of the Diesel Generator Plant on site, including Commissioning documentation and OEM Manual has been accepted by the engineer.
4. Completion of the functional test and acceptance of the entire oxygen and vacuum reticulation.
5. Annual production of oxygen after year 1 has been completed.
6. Annual production of oxygen after year 2 has been completed.
7. Annual production of oxygen after year 3 has been completed.

Payment Certification will include adjustment for all penalties incurred.

### **20.2 Works Completion**

Works Completion will be issued after:

1. All sectional completion certificates have been issued.
2. All snags have been signed off by the engineer.

## **21 PRICE SCHEDULES**

Tenderers are required to submit unit prices as indicated in the "Detail of Tender Price". Provisional and General (P&G) to be indicated separately.

Price to hold firm for 90 days from tender closing date.

## **22 PENALTIES**

The following penalties shall be applicable:

1. Late sectional completion (as defined in this document) of each section of the project at 5% of sectional value per week or part thereof.
2. Once the plant has been accepted, each and every plant production failure event not attended to within 4 hours - 20% of annual fee.
3. Each day or part thereof without production within specification - 10% of annual fee.

A plant production failure event is defined as oxygen not being available at the point of connection into the hospital piping system at  $\pm 10\%$  of the nominal pressure or  $\pm 5\%$  purity for 30 minutes.

## **23 SITE VISIT**

A mandatory site visit will take place at 10h00 on Tuesday 26 April 2022 on site. A register will be kept and only companies present at 10h00 will be considered.

All interested parties should meet at the main hospital entrance, Dr Mbuende Street, Gobabis, Namibia.



## 24 GENERAL CONDITIONS

If successful, the Contractor will follow the normal Right to Care procurement process. Right to Care Standard Procurement Terms and Conditions shall apply.

## 25 EQUIPMENT STANDARD

### 25.1 PSA Plant

The PSA must deliver oxygen at the specification set by the WHO. For ease of reference, these standards include (but are not limited to):

Output	A flowrate equivalent to 0 to 500 Liters per minute O <sub>2</sub> at atmospheric pressure according to demand. Output must be automatically restored after a power interruption.
Purity:	Gaseous oxygen at 93% V/V with lower tolerance at 90%V/V and upper tolerance at 96%V/V of O <sub>2</sub>
Pressure:	420kPa with lower tolerance at 400kPa and upper tolerance at 441kPa at 0% demand and 100% demand
Duty Cycle:	The plant must produce medical grade oxygen, at scale, pressure and purity, 24 per day, 7 days per week.
Electrical Supply:	380VAC ± 15% - 3 phase at 50Hz
Operating Temperature Range:	5°C to 50°C

Any conflict between this standard and that of the WHO specification should be brought to the attention of the Engineer.

### 25.2 Vacuum Plant

The vacuum plant must have a capability of:

Output	Equivalent of 0 to 1 550 Liters per minute at atmospheric pressure according to demand. Output must be automatically restored after a power interruption.
Pressure:	Maintain 60kPa below atmospheric pressure
Duty Cycle:	The plant must produce 24 per day, 7 days per week.
Electrical Supply:	380VAC ± 15% - 3 phase at 50Hz
Operating Temperature Range:	5°C to 50°C

### 25.3 Emergency Generator

The emergency generator plant must have a capability of:

Output	Supply 100% of the local load (lights, plugs), Vacuum and PSA plant load at 60% of generator capacity.
Change-over:	Automatic transfer from mains to emergency power within 30 seconds and back to normal after 2 minutes.
Safeties:	Over/Under voltage and phase failure protection.

Electrical Supply:	380VAC ± 15% - 3 phase at 50Hz
Operating Temperature Range:	5°C to 50°C
Diesel Storage	Separate diesel tank, including manual hand pump, with sufficient diesel for 12 hours continuous operation.
Location	The generator and diesel tank may be placed in a weather- and soundproof enclosure on a plinth outside the PSA/Vacuum Pump enclosure.

## 26 SUBMITTABLE DOCUMENTS

The following documents needs to be submitted by the tender closing date:

1. Covering letter of introduction and competency.
2. The "Bid Submission Document" contained as Addendum A that is completed, initialed on each page and signed.
3. Design drawings of the PSA, vacuum plant, emergency generator, electrical switchboards and additional medical gas reticulation including additional TUs and AVSUs. The drawings shall have sufficient detail to enable a structure to be built for it.
4. Company registration documentation
5. Value added Tax registration & Certificate of good standing documents
6. Bank Stamped Account confirmation letter
7. Completed and duly signed supplier registration form
8. Copy of the Contractor's registration
9. Copy of the technical qualifications of the person under who the installation will be done.

## 27 SUBMISSION DATE AND TIME

The completed tender submission must be filled out by hand, scanned and submitted electronically in .pdf to the email address and by the closing date indicated on the front page of the returnable document.

No late submissions shall be accepted.



# BID SUBMISSION DOCUMENT

**BID DOCUMENT FOR THE TURNKEY DESIGN, SUPPLY, COMMISSIONING AND MAINTENANCE OF:**

- 1) A NEW PSA PLANT
- 2) A NEW CENTRAL VACUUM PLANT
- 3) AN EXTENSION OF THE EXISTING CENTRAL OXYGEN AND VACUUM RETICULATION
- 4) SERVICING AND REPAIR OF THE EXISTING CENTRAL OXYGEN AND VACUUM PIPE SYSTEM
- 5) MAINTENANCE OF THE ENTIRE PLANT FOR A PERIOD OF THREE (3) YEARS.

**AT THE GOBABIS HOSPITAL, GOBABIS, NAMIBIA**

**(Hereafter called Gobabis Medical Gas Project)**

**DIRECT CONTRACT WITH**

**“RIGHT TO CARE”**

**CONTRACTOR NAME:**

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**CLOSING DATE: Thursday 11 MAY 2022 at 12h00**

Electronic submission in .pdf to: [procurement@righttocare.org](mailto:procurement@righttocare.org)

Please scan this document, completed by hand, initialed on each page and signed

## 1 SCOPE OF WORK

This tender makes provision for a turnkey project for the following:

- 1) One (1) PSA Oxygen Generating Plant to deliver oxygen at a flowrate, purity and pressure as called for in this tender specification.
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- 7) Commissioning and certification of the entire medical oxygen and vacuum system excluding the existing PSA.
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- 10) One (1) automatic emergency diesel generator to support the new PSA and Vacuum pumps.
- 11) All electrical connections into the hospital main power supply and distribution boards, reticulation and switchgear for the PSA and vacuum plant.

at the Gobabis Hospital, Omaheke Region, Namibia.

## 2 LOCAL CONTENT

### 2.1 Company Registration

The company is locally registered. Please attach a copy of registration.

## 3 COMPETANCY

### 3.1 Responsible Person

Please attach a copy of the technical qualifications of the person under whose authority the installation shall be done.

### 3.2 Record of Previous Projects

Please attach a letter of introduction stating previous PSA, Vacuum and generator installations performed by the contractor or its sub-contractors and any deviations from the engineers' report.

### 3.3 Sub-Contractors

Please provide a list of qualified sub-contractors (if any) that will be deployed on the project:

Nr	Sub-Contractor	Scope
1		

2		
3		

### 3.4 Capacity

Number of Qualified staff available for the project: .....

Number of Non-Qualified staff in full time employment available for the project: .....

## 4 DESIGN

Please attach design drawings of the PSA, vacuum plant, emergency generator, electrical switchboards and additional medical gas reticulation including additional TUs and AVSUs.

The drawings shall have sufficient detail to enable a panel of engineers to adjudicate the design and for (a) plinth(s) or structure to be designed and built.

Recommendation: We recommend a dimensioned plan of the PSA/Vacuum plant lay-out (that includes an option for adding an external oxygen cylinder filling station) and a schematic pipe reticulation drawing indicating pipe sizes, AVSUs and TUs.

## 5 PRICING SCHEDULE

Our price schedule for achieving the scope of work is as follow:

### 5.1 PSA Pricing

Item	Description	Qty	Price
1	Supply of one PSA Unit to specification	1	N\$
2	Delivery to Site	1	N\$
3	Rigging and Placement	1	N\$
4	Testing, Commissioning and Documentation	1	N\$
5	OEM Manual	2	N\$
<b>SECTION A SUB TOTAL</b>			N\$

## 5.2 Vacuum Plant Pricing

Item	Description	Qty	Price
1	Supply of one Vacuum Plant to specification	1	N\$
2	Delivery to Site	1	N\$
3	Rigging and Placement	1	N\$
4	Testing, Commissioning and Documentation	1	N\$
5	OEM Manual	2	N\$
<b>SECTION B SUB TOTAL</b>			N\$

## 5.3 Diesel Generator Pricing

Item	Description	Qty	Price
1	Supply of one diesel generator to specification	1	N\$
2	Delivery to Site	1	N\$
3	Rigging and Placement	1	N\$
4	Testing, Commissioning and Documentation	1	N\$
5	OEM Manual	2	N\$
<b>SECTION C SUB TOTAL</b>			N\$

## 5.4 Medical Gas Pipe and Electrical Installation

Item	Description	Qty	Price
1	Additional Oxygen and Vacuum Reticulation per the contractor's design based on the engineering brief.	1	N\$
2	Repair and replacement of Existing Oxygen and Vacuum installation where required.	1	N\$
3	Electrical Installation (incl c/b in sub-station, cable from substation to installation, main electrical DB, cabling to/from generator, vacuum and PSA plant and local power (lighting/plugs))	1	N\$

<b>SECTION D SUB TOTAL</b>	N\$
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**5.5 Other**

Item	Description	Price
1	P&G	N\$
2	Health and Safety	N\$
4	Operation and Maintenance: Year 1	N\$
5	Operation and Maintenance: Year 2	N\$
6	Operation and Maintenance: Year 3	N\$
7	Other:	N\$
8	Other:	N\$
<b>SECTION E SUB TOTAL</b>		N\$

Total (Sub-section A+B+C+D+E)      N\$.....

Add 5% Contingency                      N\$.....

Add V.A.T.                                      N\$.....

Total Tender Price                          N\$.....

Tender price in words.....

**Price to be firm for 90 days from date of tender closing date.**

**6 CONTRACT PERIOD**

Lead time, in days, from appointment, required for manufacturing: .....days

Time, in days, required for delivery, placement, commissioning: .....days

Time, in days, for maintaining the PSA plant: 1095 days from final acceptance.

**7 SERVICES REQUIREMENTS**

Please state the dimensions required for the PSA plant: .....m by .....m.

Please state the dimensions required for the generator plant: .....m by .....m

Please state the running electrical supply requirement: .....A @ 380V, 3ph

Please state the electrical protection (trip) requirement: .....A @ 380V, 3ph

**8 TENDERER's STATEMENT**

I/We tender for the execution of the services as described herein:

TENDERER's REGISTERED NAME AND ADDRESS (For JBCC/FEDIC Appointment):

.....  
.....  
.....

COMPANY CONTACT NUMBER:

.....

COMPANY REGISTRATION NUMBER (For JBCC/FEDIC Appointment):

.....

COMPANY VAT NUMBER (For JBCC/FEDIC Appointment):

.....

Tenderer's Authorised Signatory

.....

Name: .....

Capacity: .....

Mobile No: .....

Date: .....